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Emmission Update and Projections for Ohio Air Quality Maintenance Analysis

GCA Corp, Bedford, MA GCA Technology Div

Prepared for

Environmental Protection Agency, Chicago, IL Region V

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Emission Update And Projections For Ohio Air Quality Maintenance Analysis

Final Report

Contract No. 68-02-1376
Task Order No. 25

Prepared For
U.S. ENVIRONMENTAL PROTECTION AGENCY
Region V
Air and Hazardous Materials Division
Chicago, Illinois 60604

June 1977

GCA/TECHNOLOGY DIVISION
BEDFORD, MASSACHUSETTS 01730

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EMISSIONS UPDATE AND PROJECTIONS FOR OHIO AIR QUALITY MAINTENANCE ANALYSIS

By

GCA/Technology Division
Burlington Road
Bedford, Massachusetts 01730

CONTRACT NO. 68-02-1376 TO 25

FINAL REPORT

Prepared for

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Air and Hazardous Materials Division
Chicago, Illinois 60604
March 1977

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ABSTRACT

In some areas of Ohio, TSP and SO_2 air quality levels are near or above the annual standards. This study was designed to determine the area source emissions for 22 counties, and calculate the contribution of the area sources to the ambient air quality for an area wide receptor grid. To determine if problems will be encountered in maintaining air quality standards in the future, the area source emissions were projected for the years 1980 and 1985.

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SECTION I

INTRODUCTION

In some areas of Ohio, TSP and SO_2 air quality levels are near or above the annual standards. As part of a series of programs to model these areas, and determine the sources which are contributing to the problem, this contract was initiated to develop an Area Emission Inventory for eight Air Quality Maintenance Areas (AQMA'S), and determine the contribution of area sources to the ambient TSP and SO_2 air quality levels.

To assist Ohio Environmental Protection Agency (OEPA) in their modeling effort, two grid systems were developed for each AQMA, and the area emission contribution to the air quality at each grid receptor was calculated. Thus, for OEPA to obtain ambient air quality, all that is required is the determination of the point source emission contribution to each grid receptor, adding this contribution to the area source contribution, and applying the calibration constants. The first grid system, which was developed for each AQMA, covered the AQMA with a 5 km separation between grid receptors. The second grid system for each AQMA had a 2.5 km separation between grid receptors, and was developed in conjunction with OEPA to cover the region in each AQMA which was experiencing high TSP levels.

TSP emissions were the primary concern under this contract. The methodology utilized to develop the Area Emission Inventory was extracted from "Guidelines for Air Quality Maintenance Planning and Analysis, Volume 7: Projecting County Emissions,"[1] and "Guide for Compiling a Comprehensive Emission Inventory."[2] The methodology in References 1 and 2 was utilized to obtain data for most categories on the NEDS Area Source Form. Thus, when the CAASE[3] programs were utilized for subcounty allocation and calculation of the emissions, both particulate and SO_2 emissions were determined. Although the SO_2 emissions are not discussed or tabulated in this report, all model calculations were performed for both pollutants. With the data generated under this report, EPA or OEPA could readily calibrate the predicted SO_2 air quality data which was generated under this contract, and determine the ambient SO_2 air quality for each AQMA.

The contract was subdivided into a number of tasks which developed the data required to determine the area emission contribution to the ambient air quality at a number of receptors. Under the first task a current NEDS Point Source Inventory for the counties of interest was obtained to determine the fuel utilization by point sources, and to extract from the NEDS file the point source emissions which were required to validate the model, and calculate the base year air quality. Once the point source fuel usage was determined, the area source fuel for each county could be calculated. The CAASE system was utilized to calculate the area emissions, and allocate the emissions to subcounty grids. With the completion of the emission inventory, TSP air quality data was obtained from Region V, and the model (MCDM)[4] was validated for the base year.

The calibration constants were then applied to the calculated air quality to determine the regions of high TSP air quality. Once the base year TSP air quality had been calculated, a fine resolution grid which encompassed the region of high air quality was defined, and the area source contribution to this grid was determined.

Under the final task of this contract the Area Emission Inventory was projected for the years 1980 and 1985 using OBERS data, and the projected inventory was allocated to the subcounty grids by means of the CAASE programs.

SECTION II

POINT SOURCE EMISSION INVENTORY

OEPA provided GCA with a NEDS formatted file of all point sources in their inventory for the 22 counties in this study. In order to obtain the data required by the model MCDM, a GCA program "EXTRACT" was modified to extract the point source data required by MCDM from the NEDS point source file, and determine the fuel consumption by point sources. Preliminary examination of the file indicated a minor problem with the location of the comment cards in the file, but modifications to "EXTRACT" overcame this difficulty. When an attempt was made to generate the summaries for each county, and generate the point source input for MCDM, errors were found in the file for 10 counties. The problem with the files was that for certain hydrocarbon sources, "Card 6" of the NEDS Point Source Form had not been included.

GCA undertook the task of examining the point source files for each county, which had missing or erroneous data, and noting the problems on a computer listing of the files which was sent to OEPA. As a result of discussions with OEPA and the project officer, another NEDS Point Source File was sent to GCA, but this time the source of the previous problems; i.e., spray booths and storage tanks, were not included in the file. Since the new file was received approximately 3 months after the original file, and the file had been updated by OEPA, the new data (generation date 22 October 1976) was utilized for all counties, and the area emission inventories were recalculated for those counties which had utilized the original data files.

The output summaries generated by "EXTRACT" were reviewed by OEPA to verify the accuracy and completeness of the data. The point source data cards generated by "EXTRACT" were utilized to plot the plant coordinates on an overlay of the county. By examining the plot, a number of errors in the plant coordinates were found and corrected. In Figures 1 through 5, the geographical distribution of the particulate point sources for each AQMA is shown, as well as the location and air quality data for the monitors.

Table 1 is a tabulation of the number of point sources in the NEDS Point Source Inventory for each county. Additionally, emission points with potential emissions greater than 25 tons/year were included as point sources for modeling purposes, and Table 1 indicates their number and the percentage of total county particulate emissions they represent. Emission points which had emission rates less than the prescribed value were added to the area emission grid square in which the emission point was located.

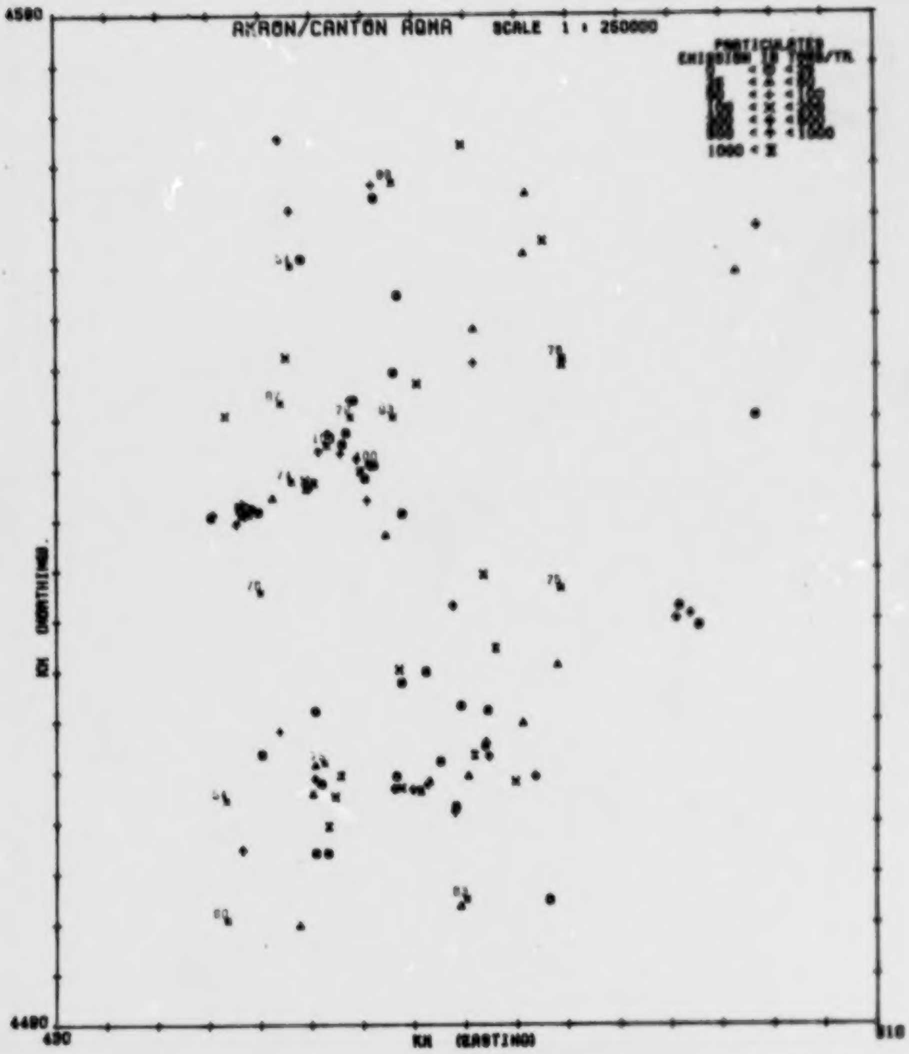

AKRON/CANTON AQMA
SCALE 1 : 250000
PARTICULATES
EMISSION IN TONS/YR
1000 <
4580
4480
430
510
KM (NORTHING)
KM (EASTING)

Figure 1. Location of particulate point emissions and TSP monitors in the Akron-Canton AQMA

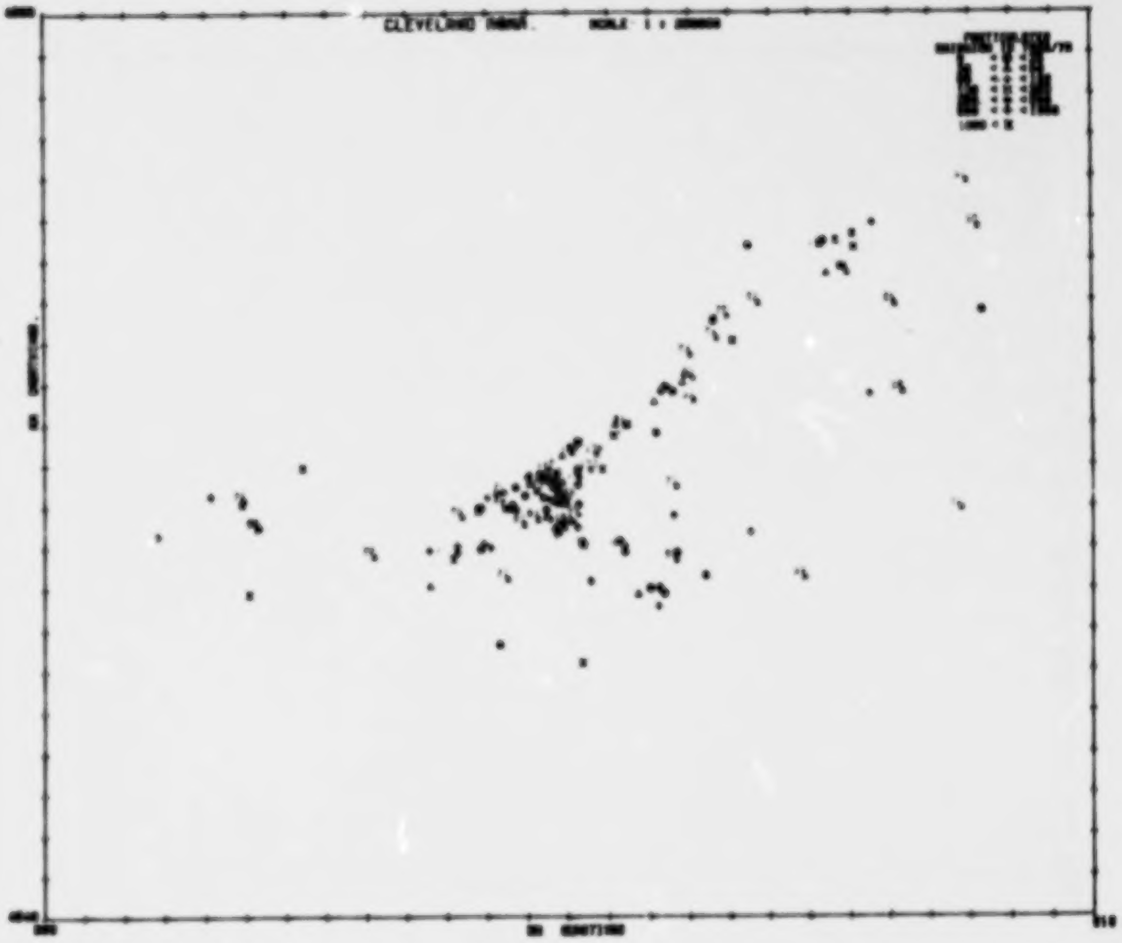

CLEVELAND
SCALE 1 :

Figure 2. Location of particulate point emissions and TSP monitors in the Cleveland AQMA

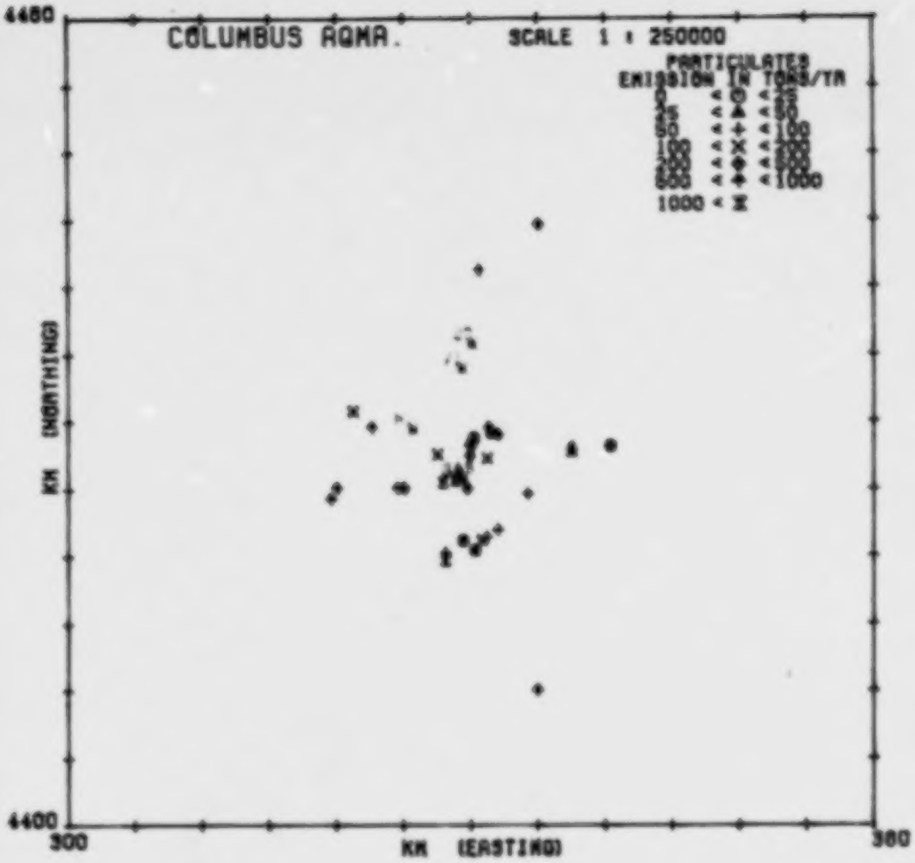

COLUMBUS AQMA.
SCALE 1 : 250000
PARTICULATES
EMISSION IN TONS/YR
0 < ○ < 25
25 < ▲ < 50
50 < + < 100
100 < × < 200
200 < ◆ < 500
500 < ✦ < 1000
1000 < ⧗
4480
4400
300
380
KM (NORTHING)
KM (EASTING)

Figure 3. Location of particulate point emissions and TSP monitors in the Columbus AQMA

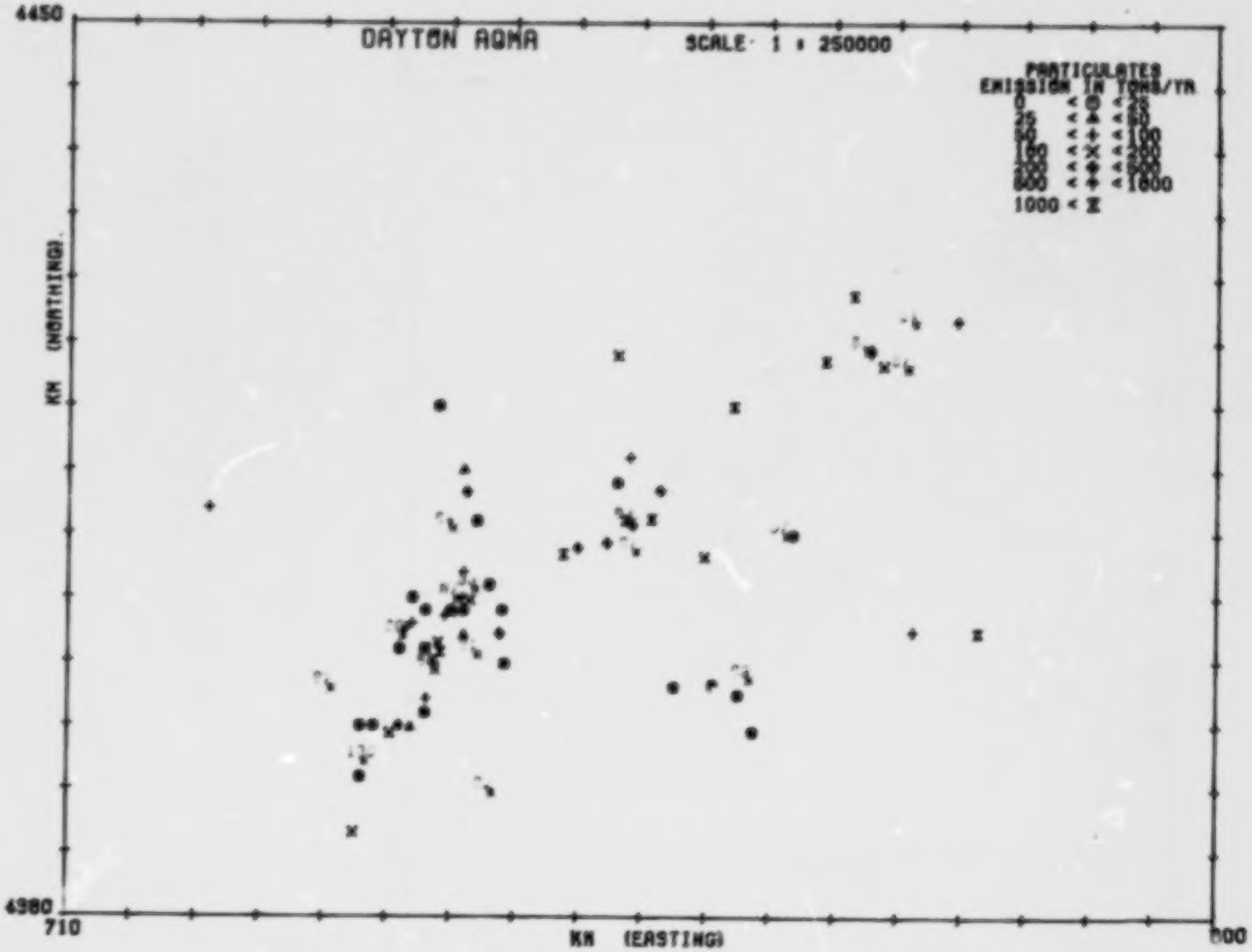

DAYTON AQMA
SCALE 1 : 250000
PARTICULATES
EMISSION IN TONS/YR
0 < ● < 25
25 < ▲ < 50
50 < + < 100
100 < X < 200
200 < ◆ < 500
500 < ◆ < 1000
1000 < X
4450
4380
710
800
KM (NORTHING)
KM (EASTING)

Figure 4. Location of particulate point emissions and TSP monitors in the Dayton AQMA

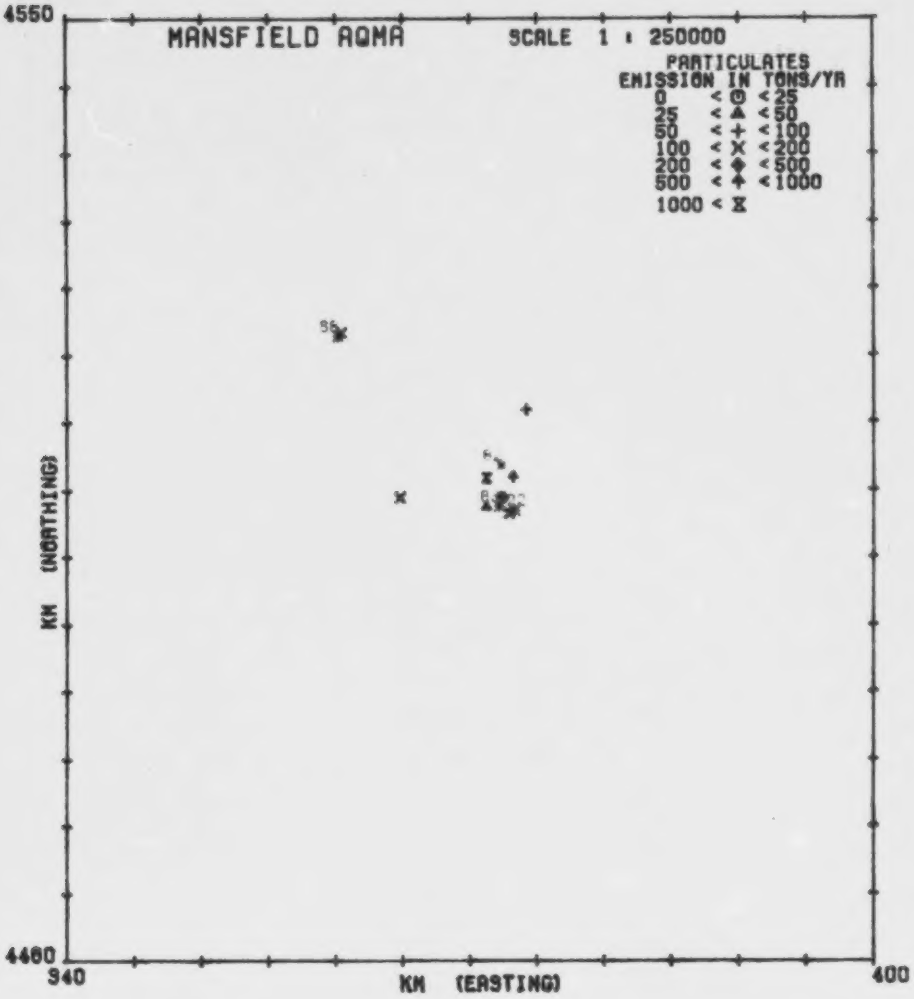

4550
MANSFIELD AQMA
SCALE 1 : 250000
PARTICULATES
EMISSION IN TONS/YR
0 < ⊙ <25
25 < ▲ <50
50 < + <100
100 < X <200
200 < ◆ <500
500 < ✦ <1000
1000 < ⧗
KM (NORTHING)
4480
340
KM (EASTING)
400

Figure 5. Location of particulate point emissions and TSP monitors in the Mansfield AQMA

Table 1. NUMBER OF EMISSION POINTS AND TOTAL EMISSIONS FOR EACH COUNTY

County	Number of emission points	Particulate emissions tons/yr	Emission points with potential emissions greater than 25 tons/yr	
			Number of emission points	Percent of particulate emissions
Belmont	33	9,834	16	100.0
Butler	120	11,210	82	98.9
Clark	30	11,035	19	99.6
Clermont	10	9,698	10	100.0
Columbiana	106	3,518	32	95.1
Cuyahoga	1,011	72,565	462	99.7
Franklin	89	14,526	73	99.3
Geauga	5	74	3	97.3
Greene	69	12,253	44	99.8
Hamilton	455	56,698	205	99.6
Jefferson	160	176,198	94	100.0
Lake	119	13,845	47	99.3
Lorain	43	51,663	43	100.0
Lucas	348	10,207	184	97.6
Monroe	223	11,200	159	99.6
Montgomery	389	18,742	121	99.1
Portage	35	894	14	100.0
Richland	36	6,444	34	100.0
Stark	278	71,964	147	99.7
Summit	632	15,005	123	99.2
Warren	12	256	3	97.7
Wood	24	2,523	23	99.8

SECTION III

AREA EMISSION INVENTORY

INTRODUCTION

One of the major tasks under this contract was the development of an area emission inventory for 22 counties in Ohio. Following the instructions in References 1 and 2, an area emission inventory was developed for each county. Reference 3 was then utilized to allocate the missions to sub-county grids. The basic data sources referenced in generating the emission inventory are:

- Mineral Industry Survey[5]
- Highway Statistics[6]
- Med-X Census Tape[7]
- Census of Housing[8]
- County Business Patterns[9]
- Waterborne Commerce of the United States[10]
- FAA Air Traffic Activity[11]
- Military Air Traffic Activity[12]

Appendix B contains a listing and sample output of the program "ALLO" which was developed to allocate fuel data from the state to the county level. Appendix C contains the NEDS Area Source Forms which were completed for each county. In order to describe the derivation of the data in Appendix C, each category will be described separately, as it appears in the form.

One item which is used for a number of emission calculations is the ash content of each type of coal. In order to determine the ash content of coal burned in each county, the average ash content for each type of coal was calculated from the ash content of the coal utilized by point sources in 1974. If coal was not utilized by point sources in a county, the average ash content for those counties utilizing coal would be used. Table 2 lists the ash content for coal which was developed for each county.

RESIDENTIAL AREA SOURCES

In order to determine the residential fuel usage in 1974, the number of households in that year was required. The estimated number of households was developed based on the estimated 1973[13] population since this was the latest year for which data was available, and the 1970 value of inhabitants per household obtained from Reference 8. The fuel utilized for heating by each household in 1974 was determined from Reference 8 by keeping coal and wood burning households at 1970 levels, and increasing the number of households heating with oil and natural gas by the product of the ratio of the market held in 1970 and the number of new households. The fuels inventoried for residential use are: coal, distillate oil, natural gas, and wood. For each of these fuels an empirical equation has been developed (page 80, Reference 1) to calculate the consumption of each type of fuel for residential heating.

In order to obtain the state total residential fuel consumption, a weighted average degree day was developed for the state. Since the 22 counties were distributed throughout the state, and contained 70 percent of the population, it was felt that this data would give a good representative value for an average degree day. The average degree day value of 5624 was developed as a weighted average of the degree days applicable to a county multiplied by the average number of rooms per housing unit, and the total number of households. The above procedure corresponds to a Level 3 inventory for residential fuel consumption.

Table 2. AVERAGE PERCENT ASH CONTENT OF COAL BURNED IN EACH COUNTY

County	Anthracite coal	Bituminous coal
Belmont	14.6[a]	12.0
Butler	14.6[a]	9.5
Clark	14.6[a]	15.5
Clermont	14.6[a]	23.1
Columbiana	14.6[a]	15.3
Cuyahoga	14.6[a]	7.9
Franklin	14.6[a]	8.7
Geauga	14.6[a]	7.1
Greene	14.6[a]	7.2
Hamilton	14.6[a]	12.0
Jefferson	14.6[a]	14.8
Lake	14.6[a]	14.4
Lorain	14.6[a]	13.6
Lucas	14.6[a]	13.4
Monroe	14.6[a]	11.5[a]
Montgomery	14.6	14.4
Portage	14.6[a]	8.0
Richland	14.6[a]	8.1
Stark	14.6[a]	7.7
Summit	14.6[a]	12.3
Warren	14.6[a]	10.0
Wood	14.6[a]	6.9

[a] Average value for this type of coal

COMMERCIAL/INSTITUTIONAL AREA SOURCES

To obtain the Commercial/Institutional (C/I) fuel totals for a county, the state residential distillate fuel oil is subtracted from the state distillate heating oil fuel category found in Reference 5. The remaining fuel is allocated to counties based on the ratio of the county C/I employment to the state total C/I employment. The point source fuel consumption of distillate oil is subtracted and the remaining distillate oil is considered the area source fuel. The above procedure is also performed for residual oil except that it is assumed that no residential sources heat with residual oil. The natural gas and coal C/I area source fuel is determined by allocating the state C/I natural gas and coal consumption found in Reference 5, to counties based on C/I employment. The point source C/I natural gas and coal consumption is then subtracted from the county total to obtain the area source fuel. No data was available on the use of wood by C/I area sources, and this field was set to zero. The methodology utilized for C/I area sources is similar to Level 2 of Reference 1, except that all fuel used for heating was allocated to the residential and C/I category.

INDUSTRIAL AREA SOURCES

To obtain the industrial fuel totals for a county, the state totals for coal, oil (distillate and residual), and natural gas were determined from Reference 5 and allocated to counties based on the ratio of county industrial employment to state industrial employment. The point source fuel consumption for each fuel was then subtracted from the county total to obtain the industrial area sources. Since no data was available on the industrial area source consumption of coke, wood and process gas, these fields were set to zero.

In Reference 1, it is recommended that the state point source fuel totals be subtracted from the state fuel totals before allocation of the remaining fuel to the counties. Since state point source fuel totals were not available, the state fuel totals were allocated to counties based on C/I or industrial employment, and the county point sources were subtracted to obtain the county area fuels. In many cases, the area fuels were negative; i.e., point sources consumed more fuel than was allocated to the county and in many cases there was a large amount of area source fuel. It was decided to sum the surpluses and deficits in the area source fuels to see if the sums were nearly the same. As a result of these calculations, the following area fuels were set to zero: C/I coal, industrial coal, and industrial oil (distillate and residual). The methodology used for Industrial Area Sources is comparable to a Level 2 update as specified in Reference 1.

TRANSPORTATION AREA SOURCES

To obtain gasoline and diesel fuel sold, Reference 6 was utilized to obtain state totals for on and off-highway fuel usage. The state on-highway fuel consumption was allocated to the counties based on automobile and truck registration. Gasoline was further allocated to light and heavy duty vehicles based on the assumption that 89 percent of the gasoline is burned by light-weight vehicles as recommended in Reference 1. For some counties (Butler, Clermont, Hamilton, Warren, Franklin, Cuyahoga, Lake, Lucas, Montgomery, Stark, Summit) a breakdown of VMT by road type was available from Region V for 1975. For the remaining counties, VMT was calculated based on gasoline and diesel fuel sold in the county, and allocating the VMT to the rural and urban categories based on the population density code for the county, as recommended by Reference 1. These codes were extracted from a 1972 Area Emission Inventory for the selected counties which was obtained from Region V. For those counties for which VMT data was available, the inventory corresponds to a Level 3 update, and the remaining counties are Level 2 updates. Off-highway fuels were allocated to counties based on population. State railroad fuel totals were allocated to counties based on the ratio of county railroad mileage to state railroad mileage which was obtained from the Ohio Department of Transportation, Bureau of Systems Planning.

Aircraft operations for all airports with FAA towers was obtained from References 11 and 12. For small local airfields, data on the number of operations, which is coded on FAA 5010 forms, was obtained from FAA for all public airfields. This data estimated the number of operations for most airports, but when no estimated operations are available, GCA estimated the number of operations by multiplying the number of based aircrafts by 365 to obtain yearly operations, as suggested in Reference 2.

For vessels, the procedure in Reference 2 was utilized. Since Reference 10 details the travel between ports, underway fuel was allocated by mileage to counties along the river for vessels docking upstream. Contact with the Port of Cleveland and Port of Toledo Lake Carriers Association indicated no compilation was avilable on coal consumption by vessels. The gasoline usage by vessels was set to zero since it is included in off-highway fuel usage.

The allocation of railroads, aircraft and vessels corresponds to a Level 3 update.

FUGITIVE AREA SOURCES

An attempt was made to include fugitive sources in the particulate emission inventory. The report "Emissions Inventory of Agricultural Tilling, Unpaved Road, and Airstrips and Construction Sites"[14] was utilized to obtain an emission inventory for fugitive particulate sources. The data is coded on the area source forms, but when the appropriate emission factors were applied, the emissions seemed extremely high, and were not used for modeling (see Table 3). Table 4 contains the emission factors and the data utilized to calculate the fugitive emissions. To calculate the emissions from a source, the emission factor for that category is multiplied by the appropriate variable; e.g., VMT on dirt roads. Previous work by GCA has indicated that a local inventory of fugitive sources must be compiled, rather than the values in Reference 14 which are excessive for some portions of the country.

Table 3. PARTICULATE AREA EMISSIONS

County	Particulates, tons/yr	Particulates, tons/yr with fugitive sources
Belmont	749	
Butler	1,402	
Clark	954	127,916
Clermont	662	
Columbiana	899	
Cuyahoga	6,430	
Franklin	4,113	
Geauga	438	
Greene	655	91,149
Hamilton	4,203	
Jefferson	776	
Lake	1,381	
Lorain	1,444	
Lucas	2,132	177,992
Monroe	99	
Montgomery	2,602	171,318
Portage	861	143,422
Richland	860	
Stark	1,972	252,608
Summit	2,718	177,410
Warren	689	
Wood	577	110,965

Table 4. EMISSION FACTORS AND DATA FOR FUGITIVE EMISSION CALCULATIONS

County	Dirt road VMT, 1000 mi	Dirt road emission factor, lb/vehicle-mi	Construction acreage	Construction emission factor, tons/acre	Tilling acreage 1000 acres	Tilling emission factor, lbs/acre
Clark	33,300	3.24	1,020	17.0	354	9.77
Greene	22,600	3.24	854	17.0	320	17.20
Lucas	18,900	3.24	3,750	17.0	225	8.64
Montgomery	31,300	3.24	3,900	17.0	224	8.97
Portage	38,100	3.24	1,090	17.0	151	7.78
Stark	63,500	3.24	2,580	17.0	266	7.78
Summit	34,400	3.24	3,710	17.0	37	8.97
Wood	27,900	3.24	709	17.0	841	12.50

MISCELLANEOUS AREA SOURCES

For on-site incineration, GCA was unable to obtain estimates of tonnage burned in Ohio. Open burning is allowed under a permit system and approximately 150 permits were issued in 1975. Most permits were issued for burning abandoned homes as a fire-fighting instruction. Since the emission factors are not well established for this category and the emissions are insignificant, they were not included in the inventory. Forest fires in Ohio burned 2,345 acres of woodland and corresponds to 245 tons of particulate emission if it is assumed that 12 tons were burned per acre as suggested in AP-42.[15] Since the sum is small and each fire consumed about 4 acres, it was determined that the effort required to obtain the breakdown of fires by counties and allocate to the appropriate grid would not be cost effective. The Ohio State Agricultural Department indicated that an insignificant amount of agricultural waste burning occurred, and the emissions from orchard heaters was insignificant. The amount of solvents purchased per county was calculated based on population as suggested in Reference 1.

ALLOCATION OF AREA SOURCES TO SUBCOUNTY GRIDS

The county data was allocated to subcounty grids using the CAASE methodology. The programs are described in Reference 3. The general approach utilized to generate the grid system for each county was to have high population density areas overlaid by a 2.5 km grid, less urban areas overlaid with a 5 km grid, and rural areas had a 10 km grid. The second constraint which was utilized was to develop a grid system that nearly replicated the county outline and would not overlay adjacent county grids.

Figures 6a to 6v show the population distribution from CAASE 2, and Figures 7a to 7v show the grid system which was developed for each county. The first number in each grid square is the last four digits of the grid square number, and the second value is the 1974 emission rate of particulates (tons/year) by area sources. In Figures 8a to 8h

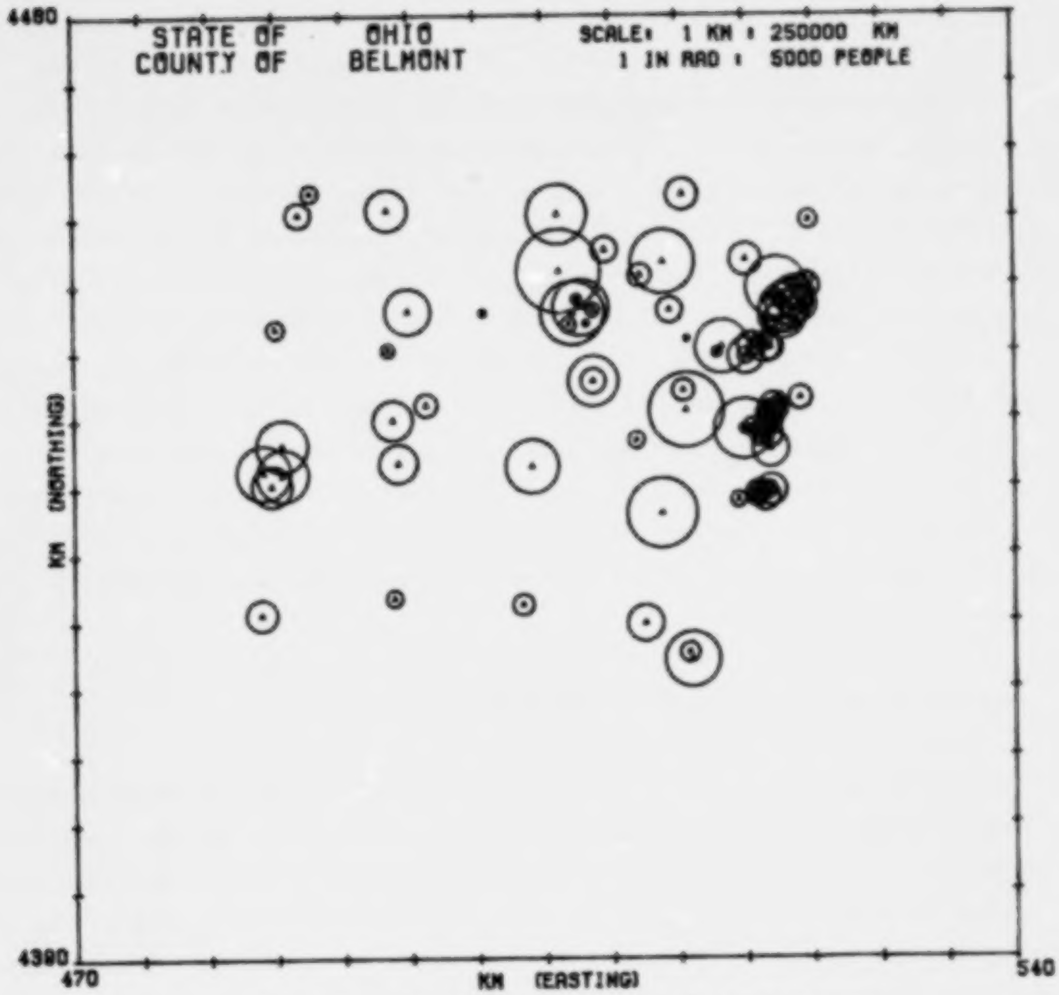


Figure 6a. CAASE 2 output for Belmont County

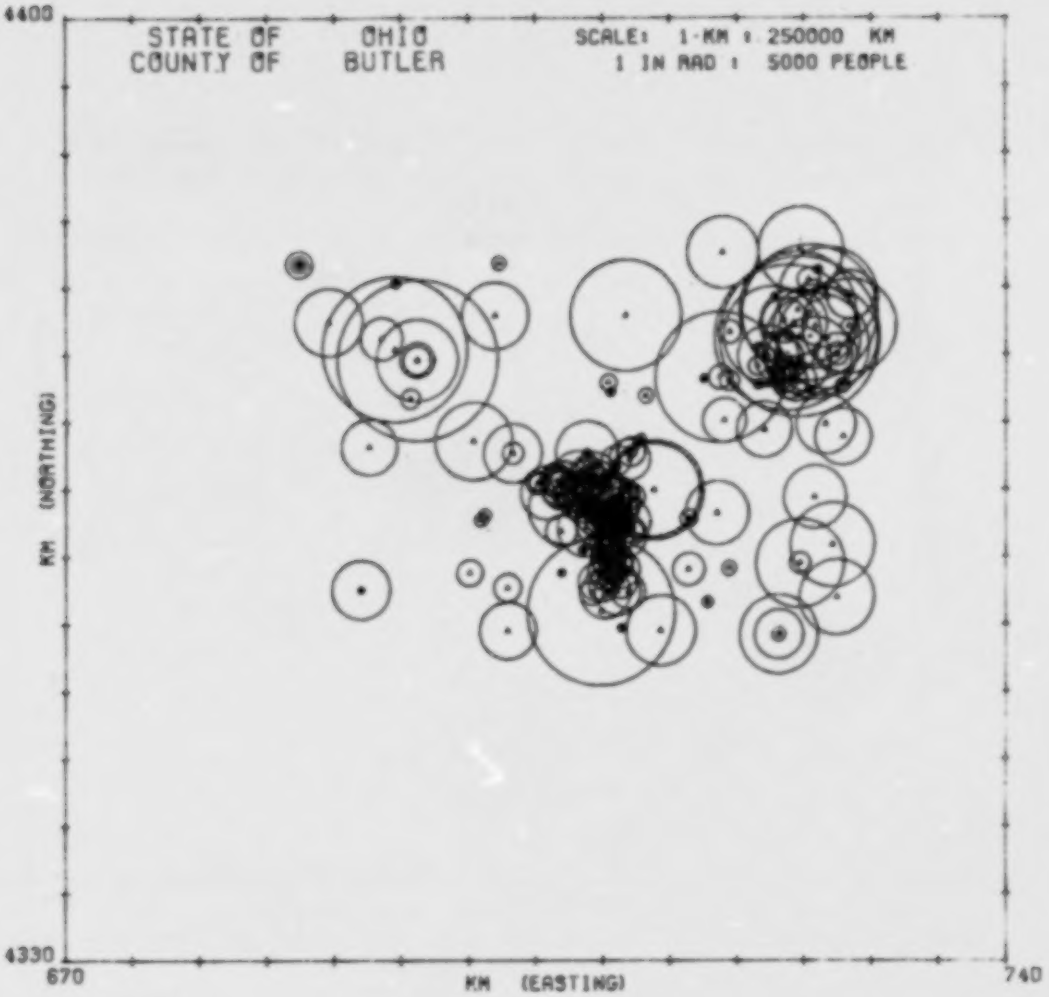

4400
STATE OF OHIO
COUNTY OF BUTLER
SCALE: 1-KM : 250000 KM
1 IN RAD : 5000 PEOPLE
KM (NORTHING)
4330
670
KM (EASTING)
740

Figure 6b. CAASE 2 output for Butler County

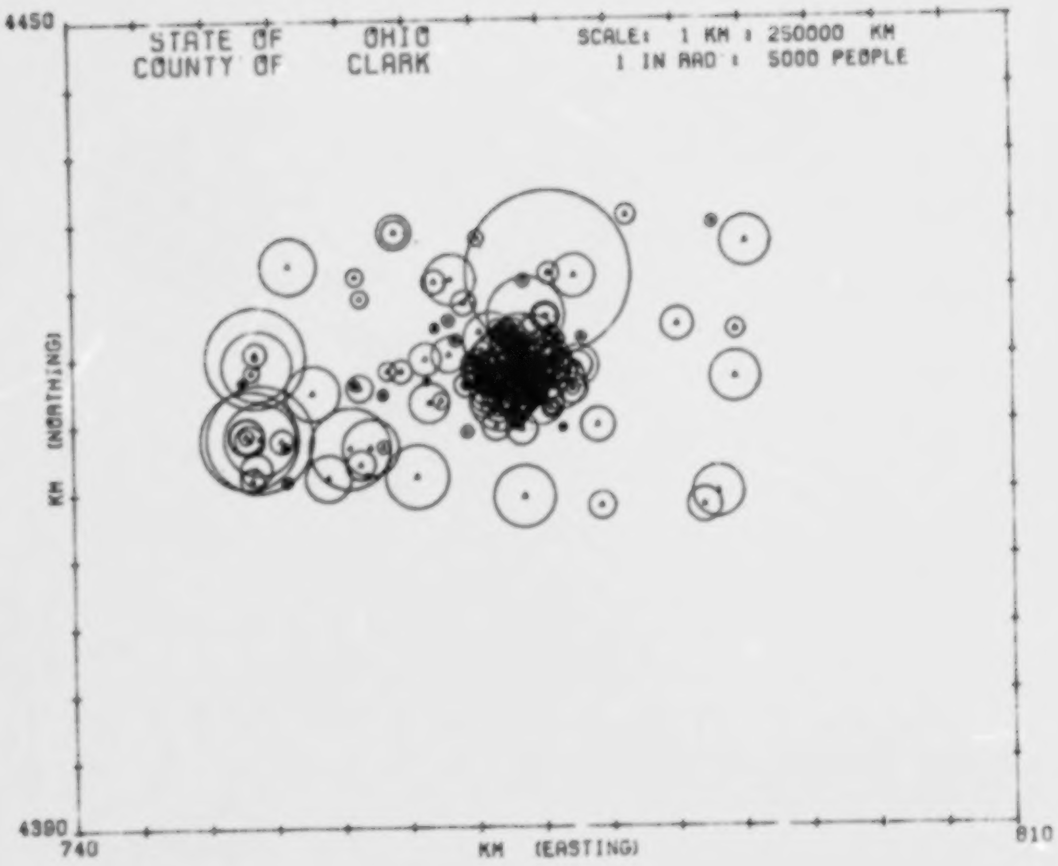

STATE OF OHIO
COUNTY OF CLARK
SCALE: 1 KM : 250000 KM
1 IN RAD : 5000 PEOPLE
4450
4390
740
810
KM (NORTHING)
KM (EASTING)

Figure 6c. CAASE 2 output for Clark County

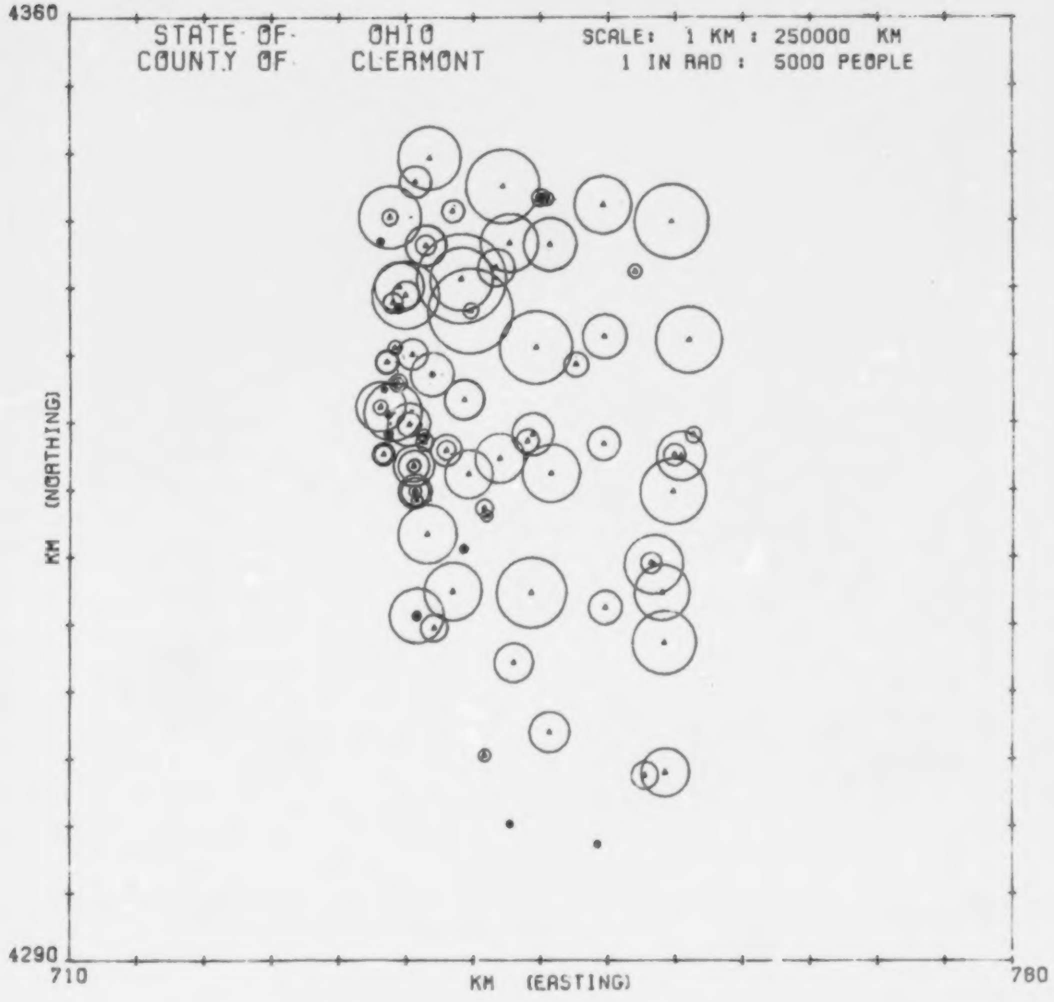


Figure 6d. CAASE 2 output for Clermont County

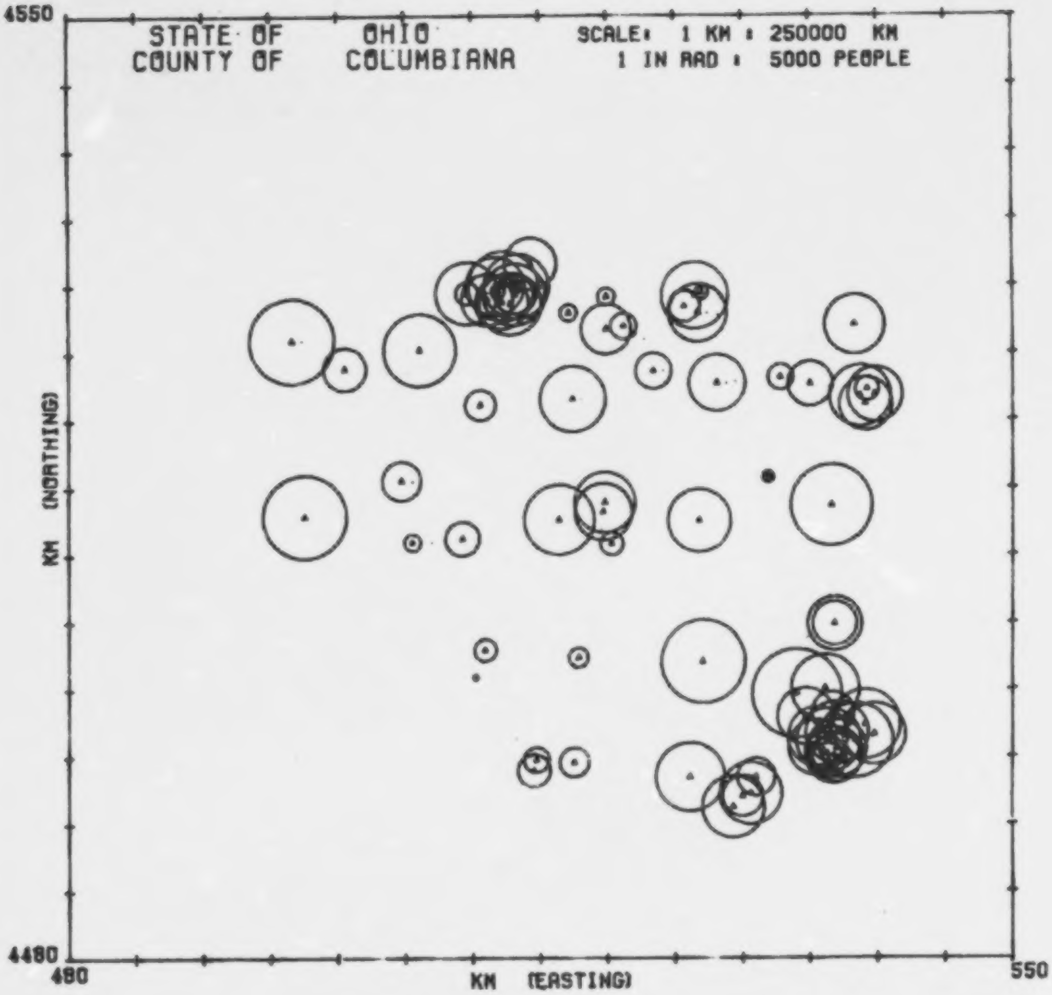

4550
STATE OF OHIO
COUNTY OF COLUMBIANA
SCALE: 1 KM : 250000 KM
1 IN RAD : 5000 PEOPLE
KM (NORTHING)
4480
480
KM (EASTING)
550

Figure 6e. CAASE 2 output for Columbiana County

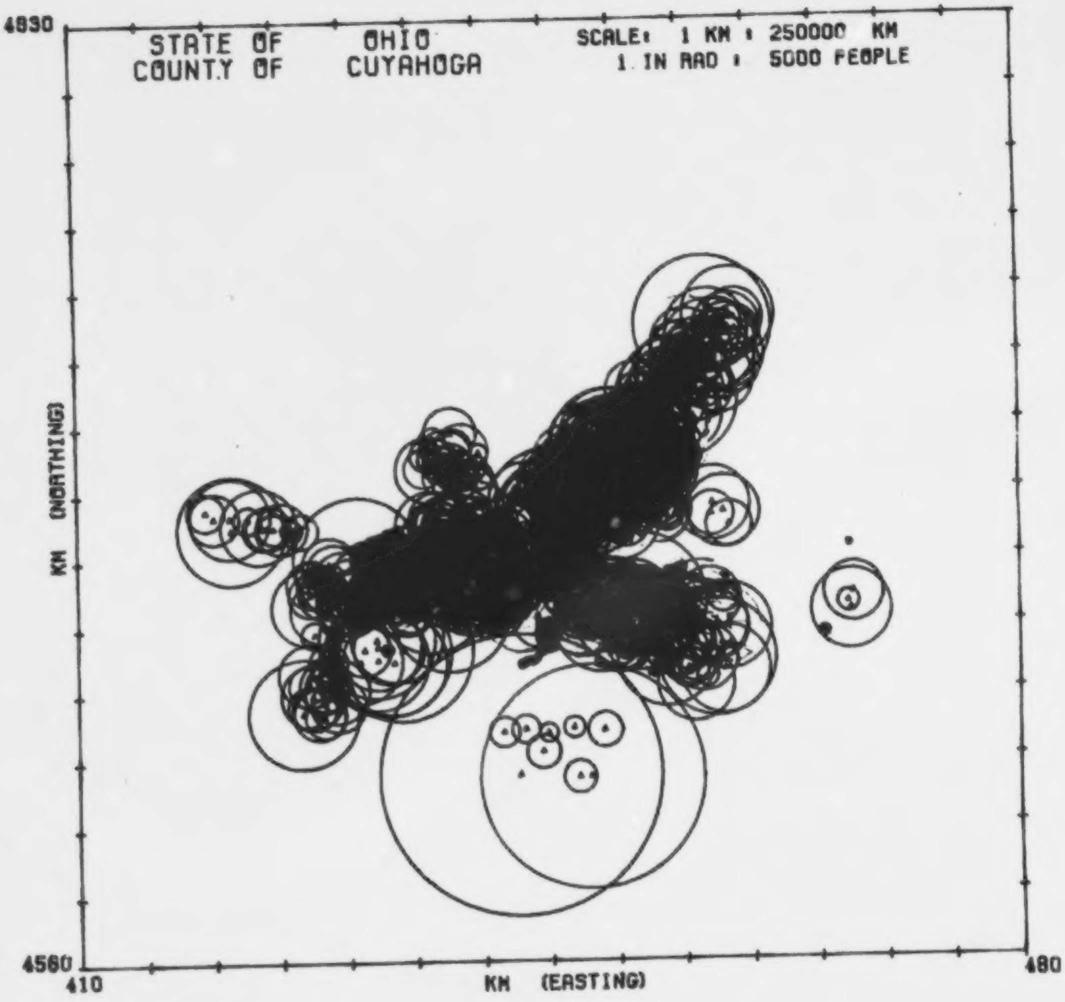


Figure 6f. CAASE 2 output for Cuyahoga County

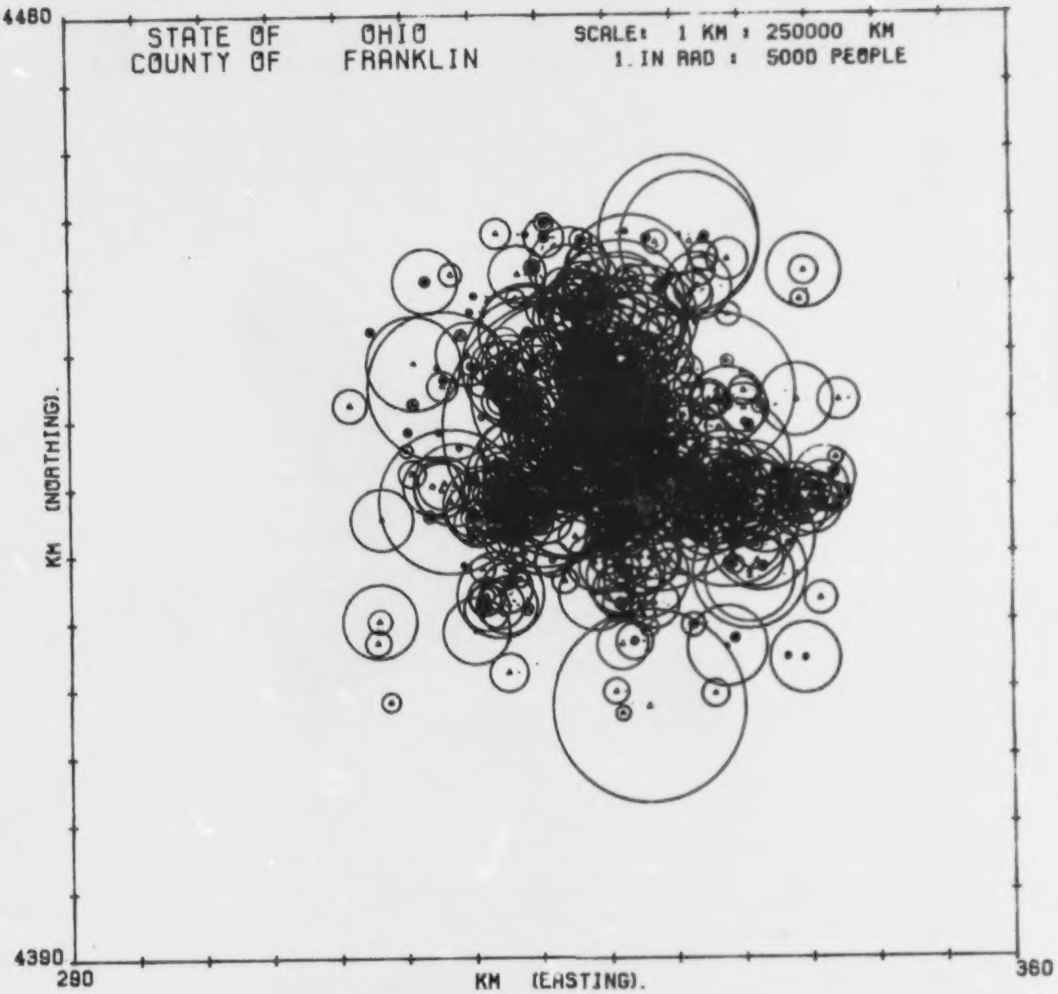


Figure 6g. CAASE 2 output for Franklin County

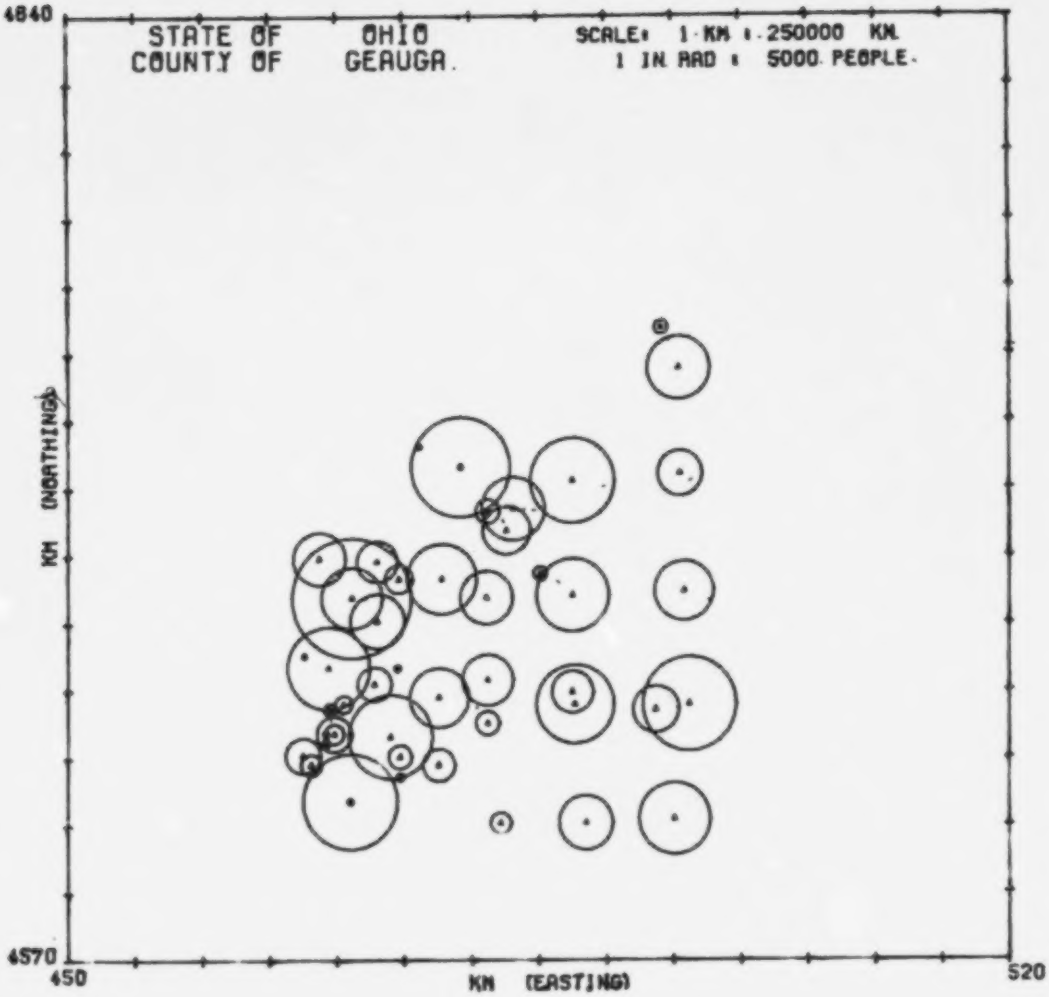

4840
STATE OF OHIO
COUNTY OF GEAUGA.
SCALE: 1 KM : .250000 KM.
1 IN RAD : 5000 PEOPLE.
KM (NORTHING)
4570
450
KM (EASTING)
520

Figure 6h. CAASE 2 output for Geauga County

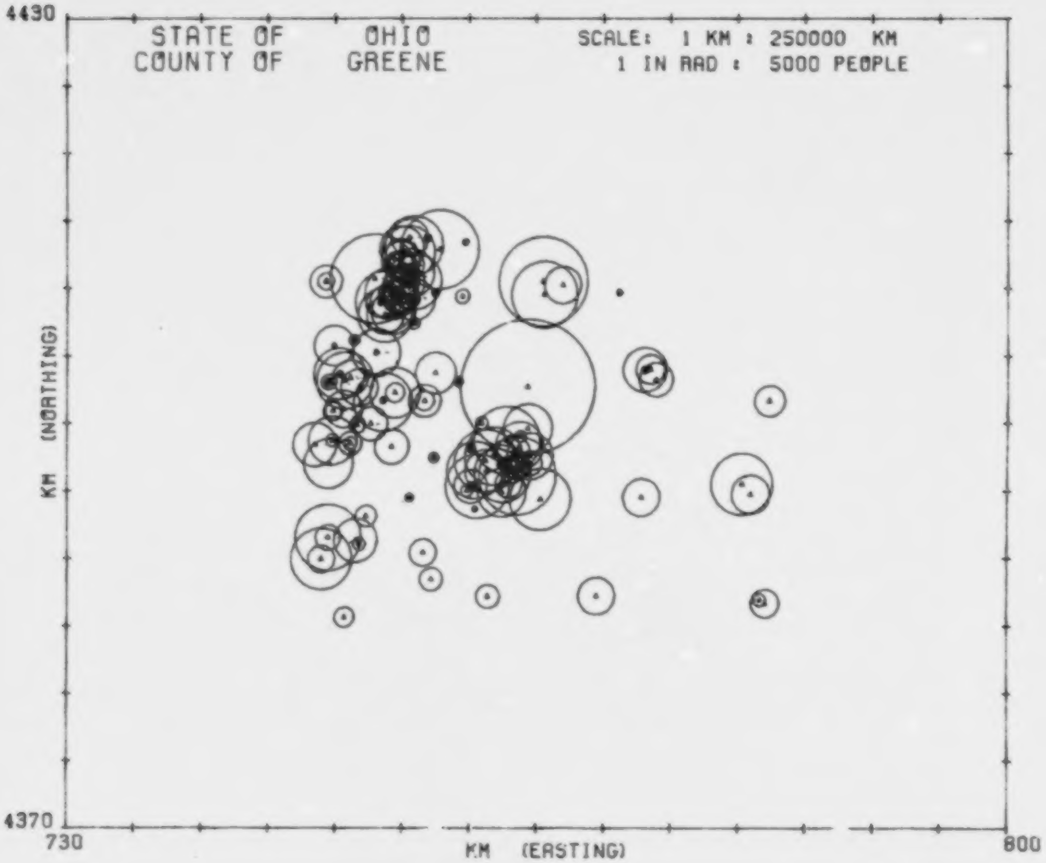


Figure 61. CAASE 2 output for Greene County

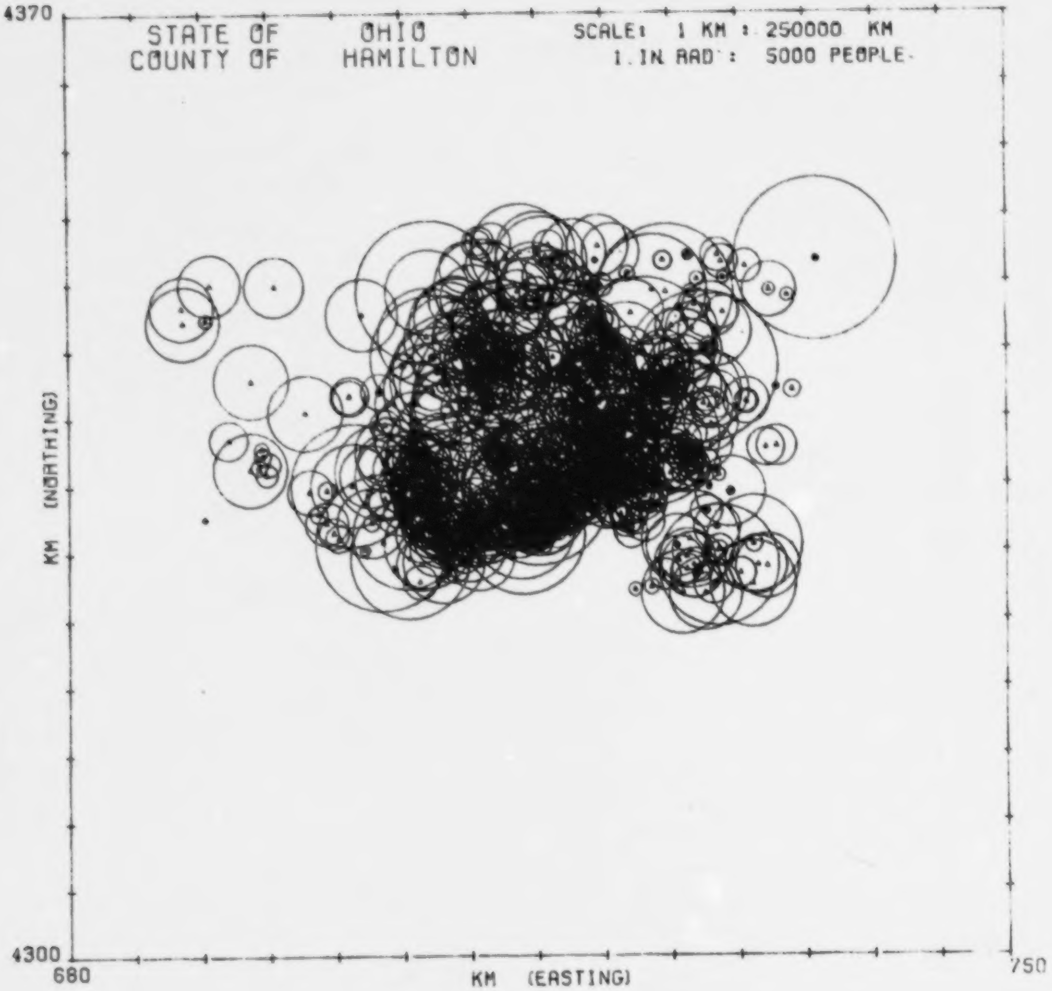


Figure 6j. CAASE 2 output for Hamilton County

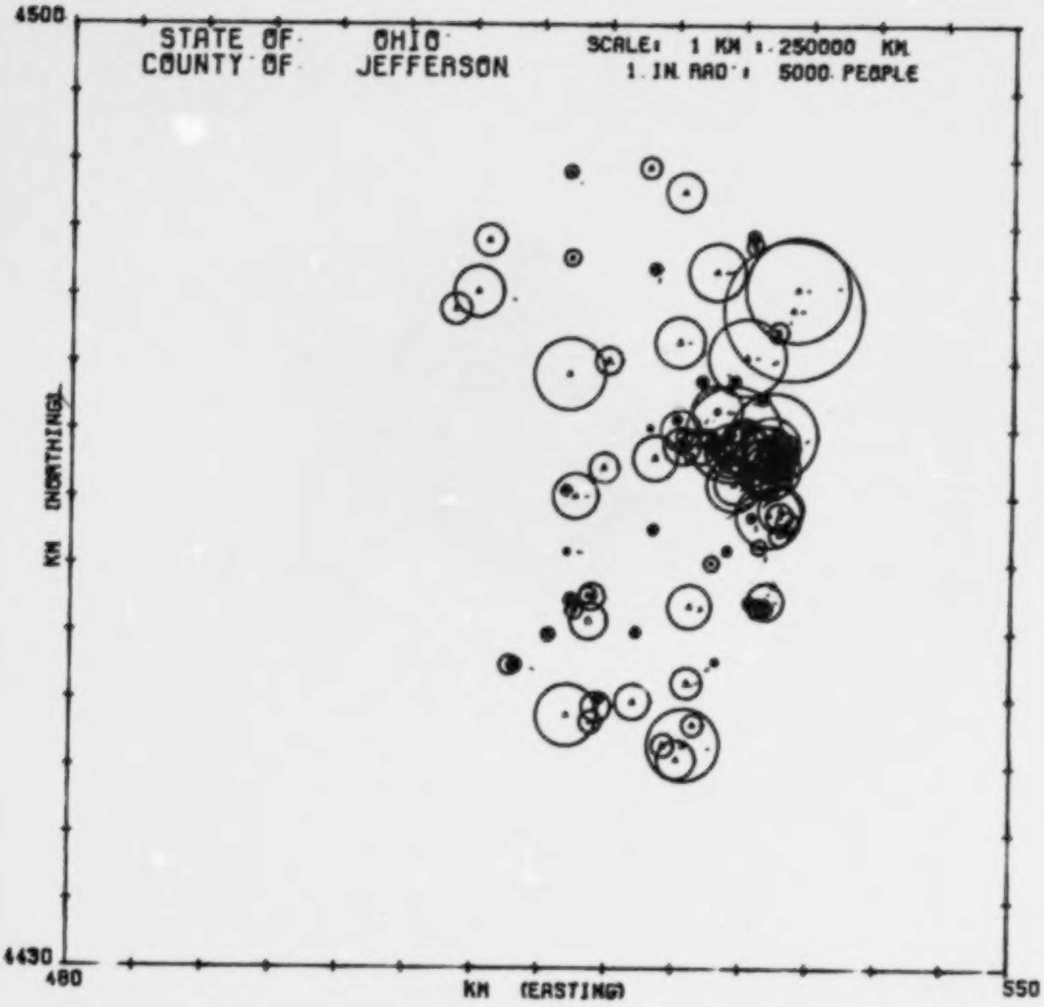

STATE OF OHIO
COUNTY OF JEFFERSON
SCALE: 1 KM : .250000 KM.
1. IN. RAD : 5000. PEOPLE
4500
4430
480
550
KM (NORTHING)
KM (EASTING)

Figure 6k. CAASE 2 output for Jefferson County

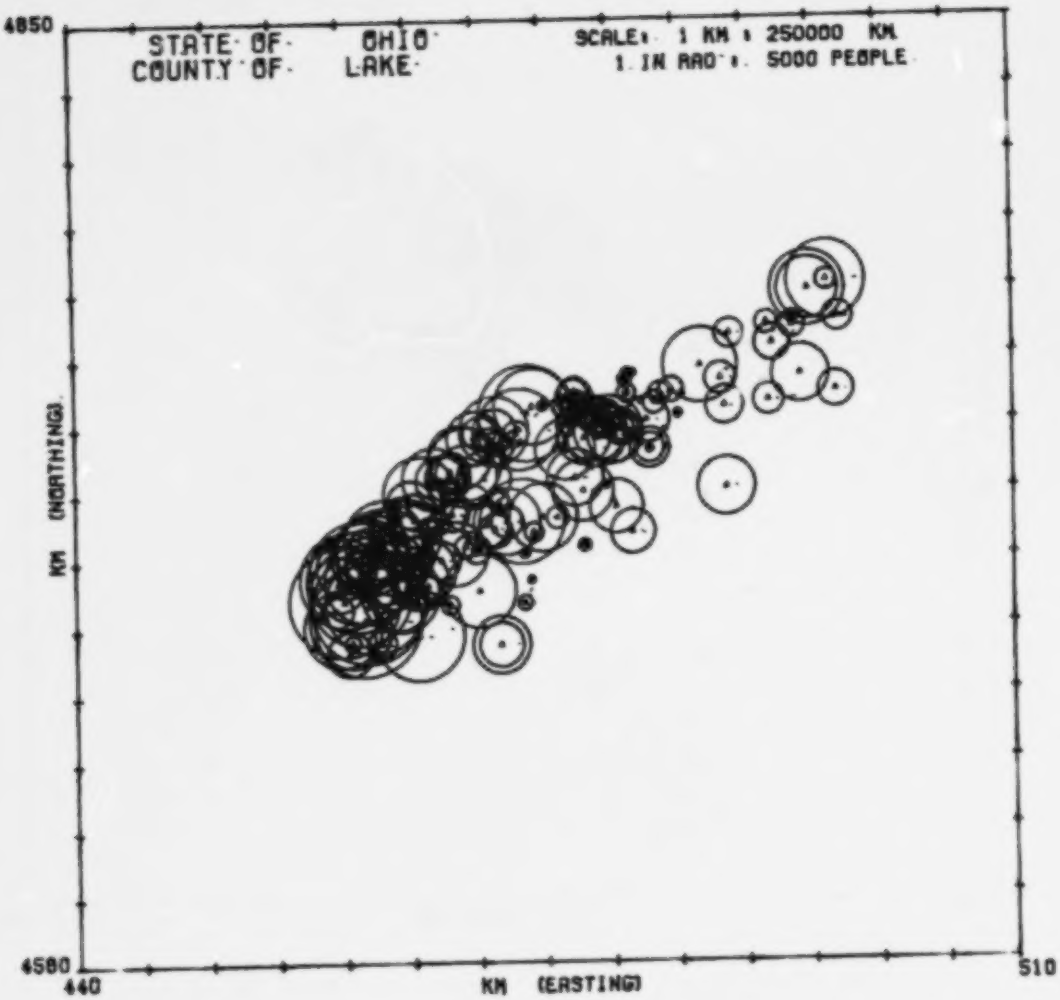

4850
STATE OF OHIO
COUNTY OF LAKE
SCALE: 1 KM : 250000 KM
1 IN RAD : 5000 PEOPLE
KM (NORTHING)
4580
440
KM (EASTING)
510

Figure 6l. CAASE 2 output for Lake County

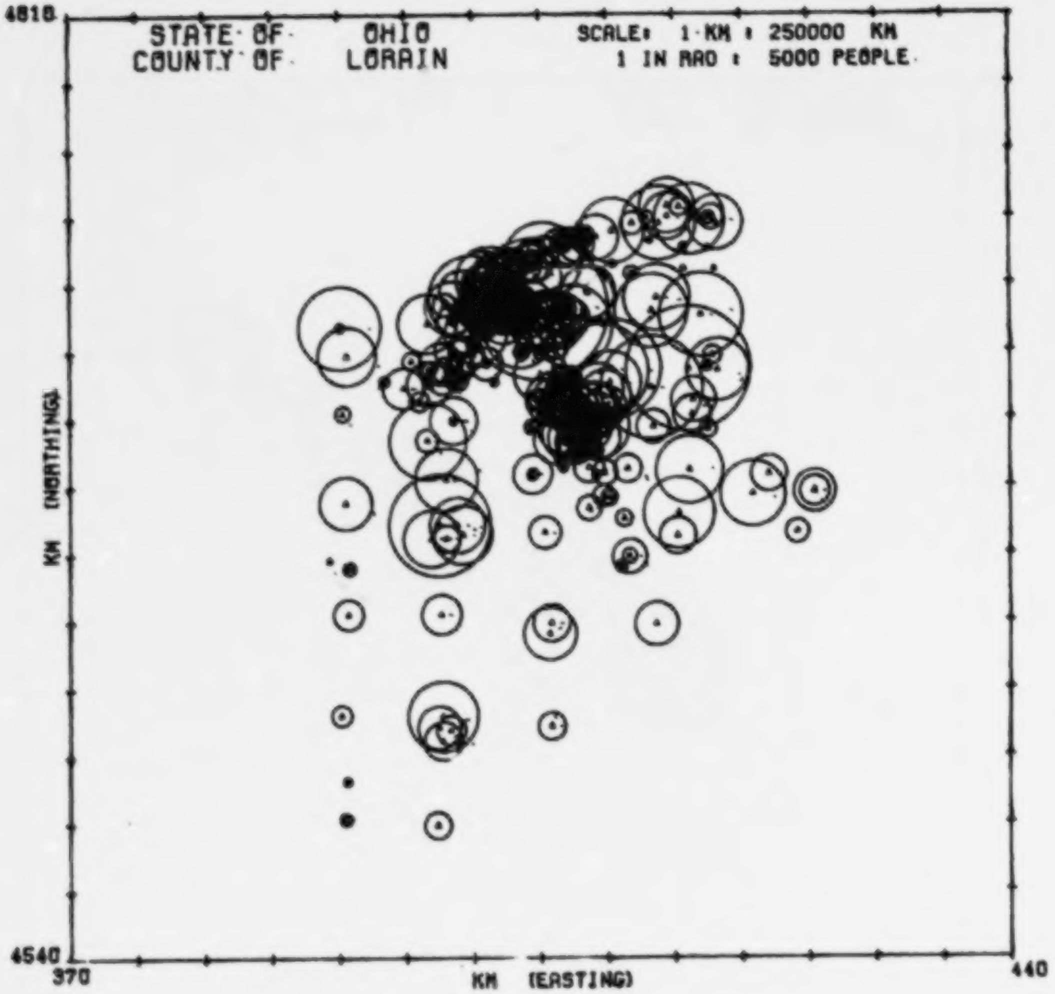


Figure 6m. CAASE 2 output for Lorain County

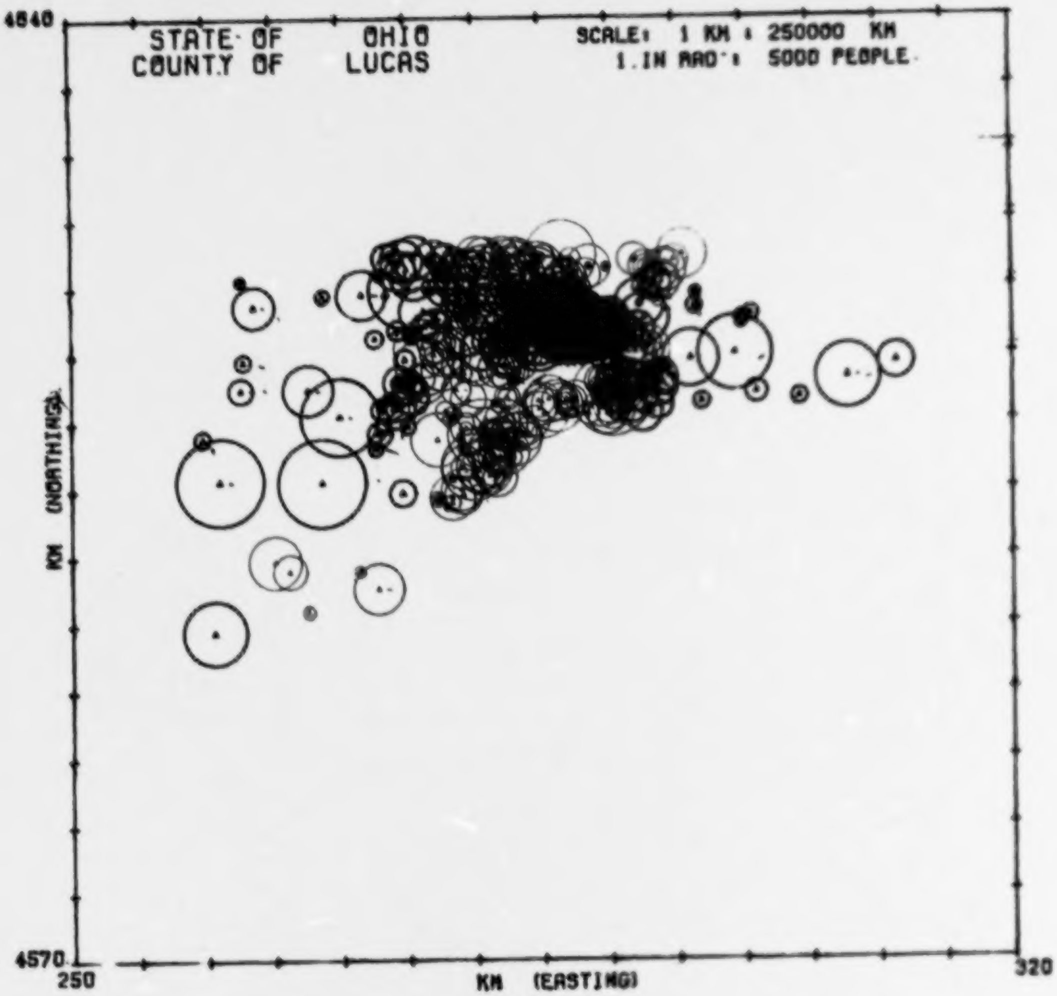


Figure 6n. CAASE 2 output for Lucas County

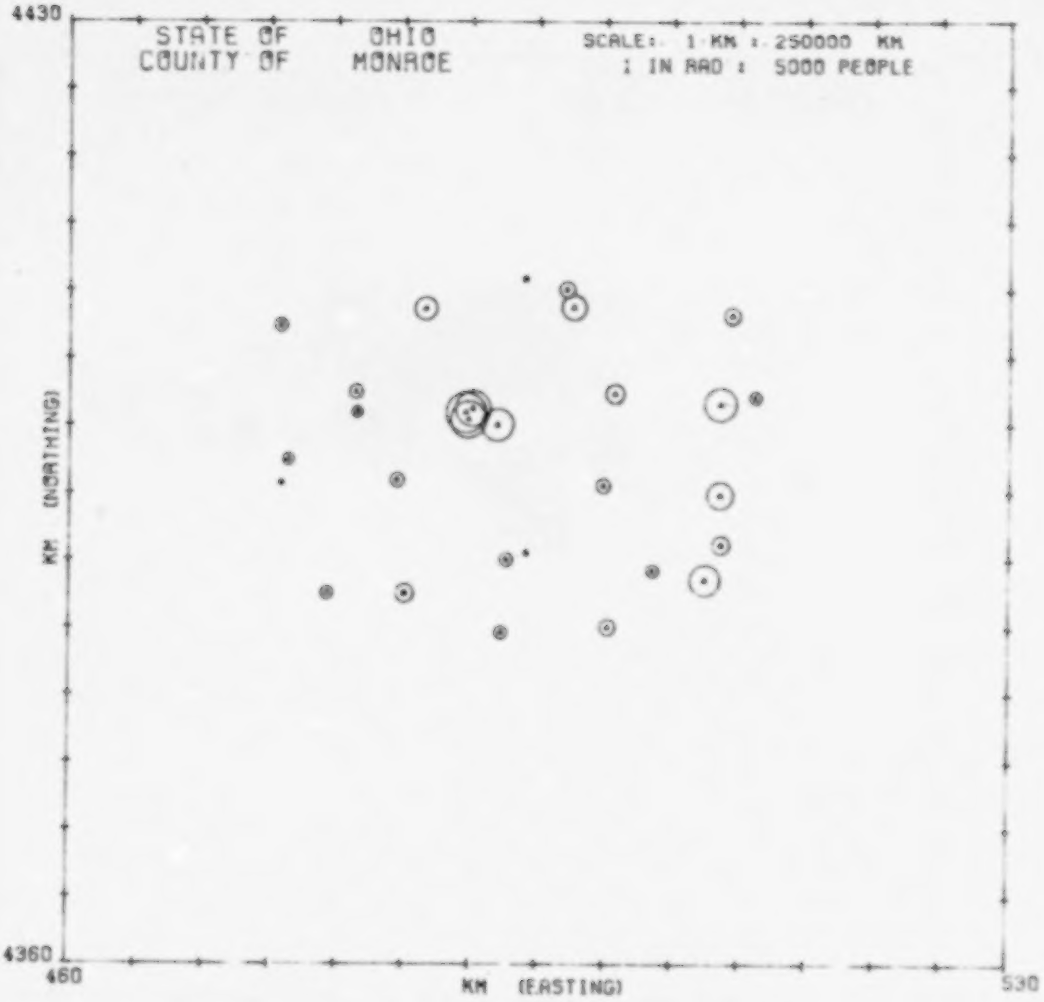

4430
STATE OF OHIO
COUNTY OF MONROE
SCALE: 1 KM : 250000 KM
1 IN RAD : 5000 PEOPLE
KM (NORTHING)
4360
460
KM (EASTING)
530

Figure 6o. CAASE 2 output for Monroe County

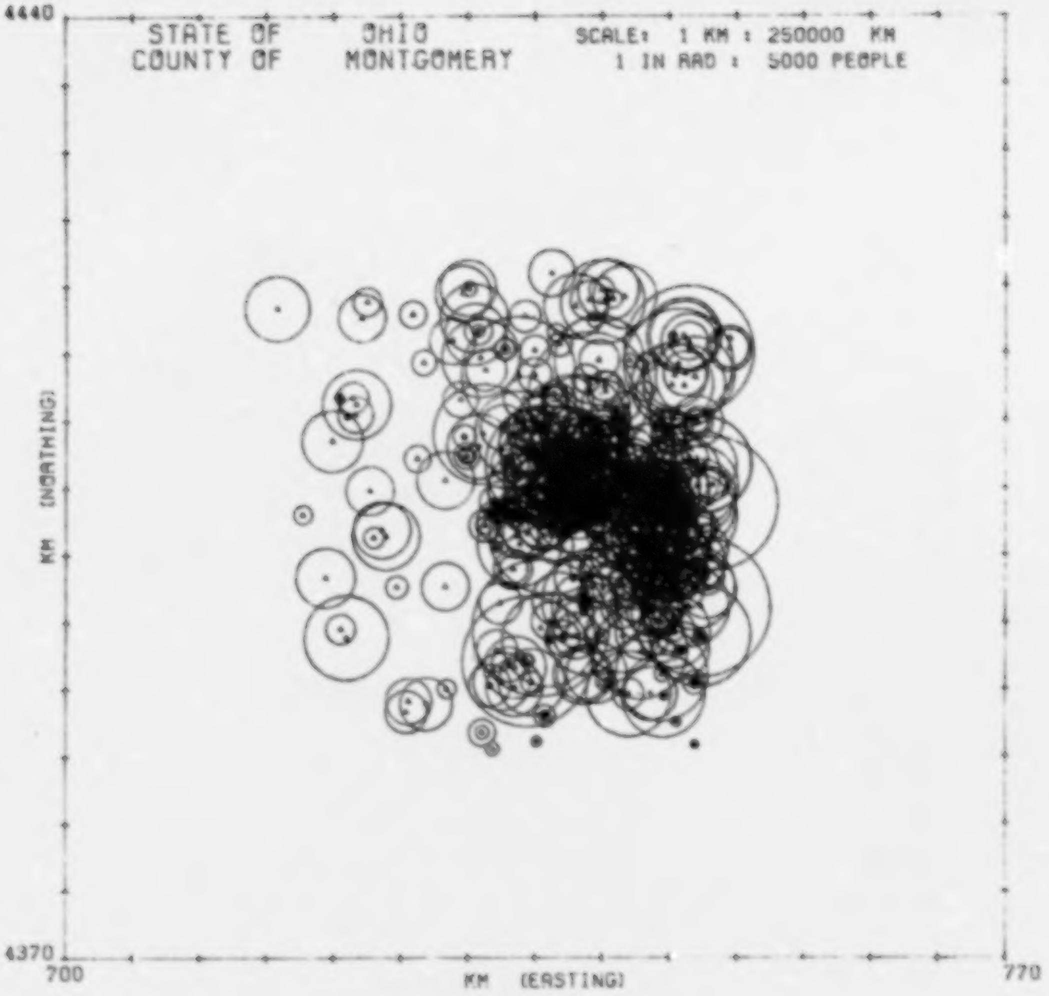

4440
STATE OF OHIO
COUNTY OF MONTGOMERY
SCALE: 1 KM : 250000 KM
1 IN RAD : 5000 PEOPLE
KM (NORTHING)
4370
700
KM (EASTING)
770

Figure 6p. CAASE 2 output for Montgomery County

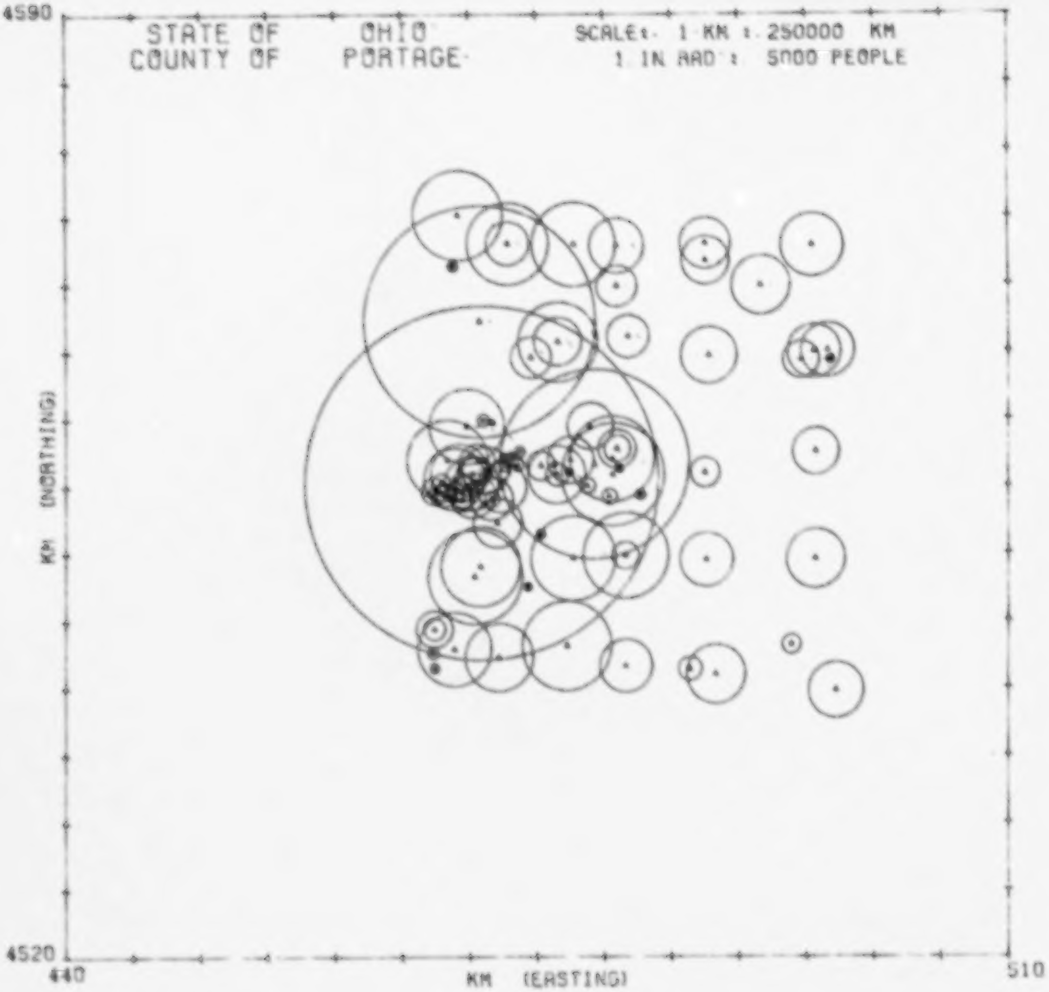

4590
STATE OF OHIO
COUNTY OF PORTAGE
SCALE: 1 KM : 250000 KM
1 IN RAD : 5000 PEOPLE
KM (NORTHING)
4520
440
KM (EASTING)
510

Figure 6q. CAASE 2 output for Portage County

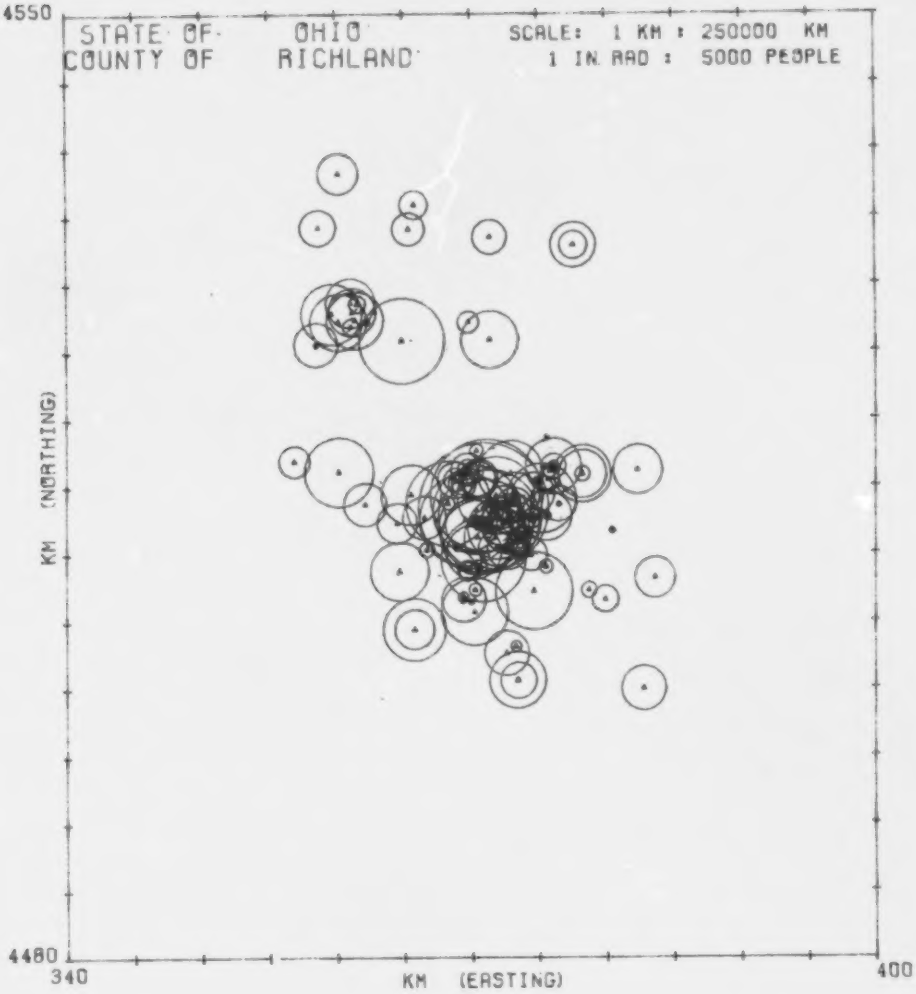

4550
STATE OF OHIO
COUNTY OF RICHLAND
SCALE: 1 KM : 250000 KM
1 IN RAD : 5000 PEOPLE
KM (NORTHING)
4480
340
KM (EASTING)
400

Figure 6r. CAASE 2 output for Richland County

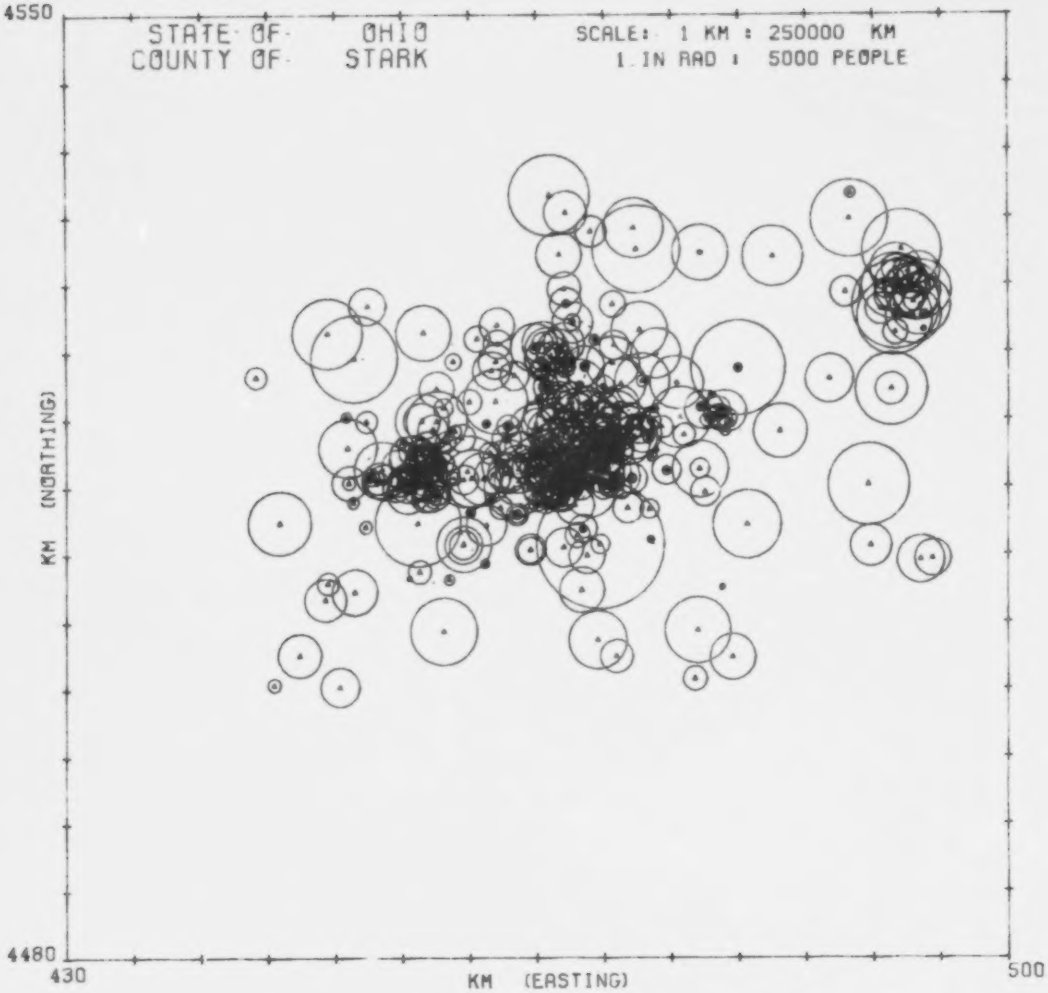


Figure 6s. CAASE 2 output for Stark County

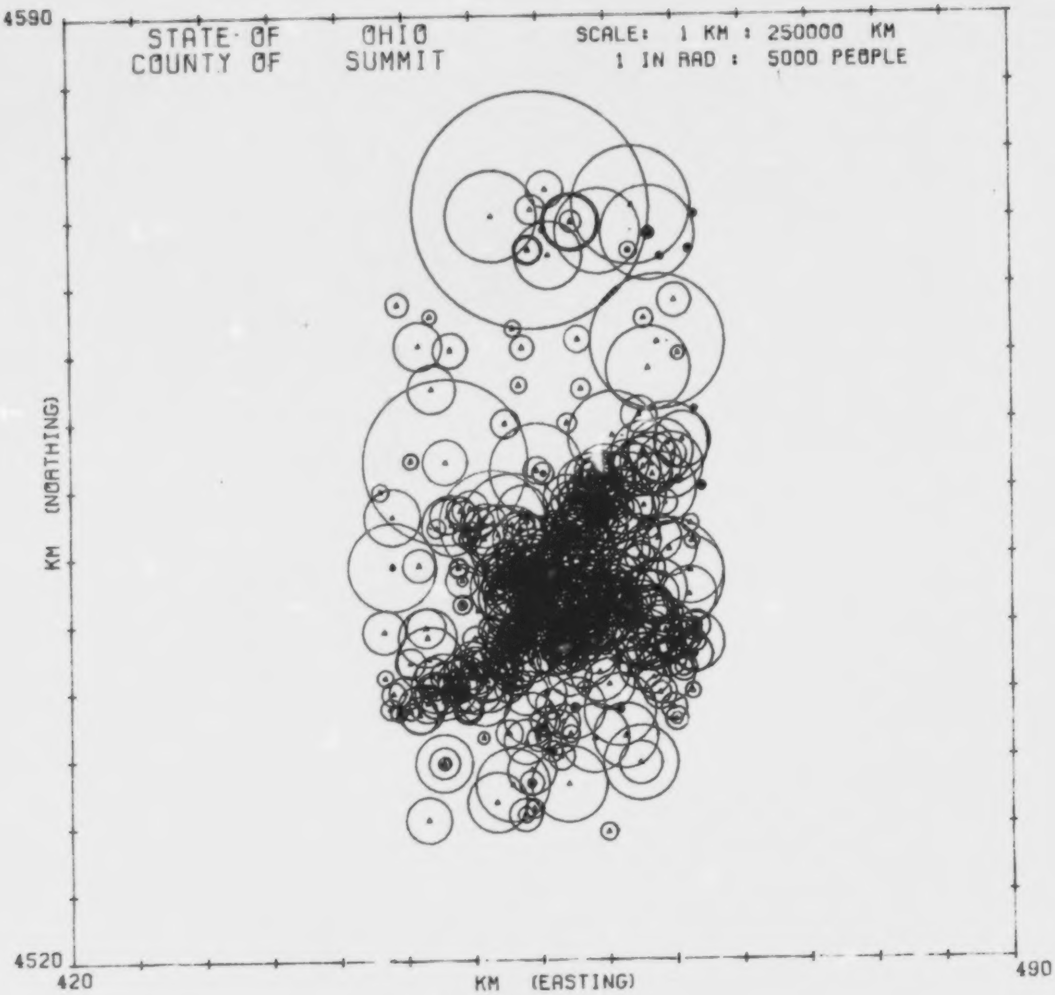

4590
STATE OF OHIO
COUNTY OF SUMMIT
SCALE: 1 KM : 250000 KM
1 IN RAD : 5000 PEOPLE
KM (NORTHING)
4520
420
KM (EASTING)
490

Figure 6t. CAASE 2 output for Summit County

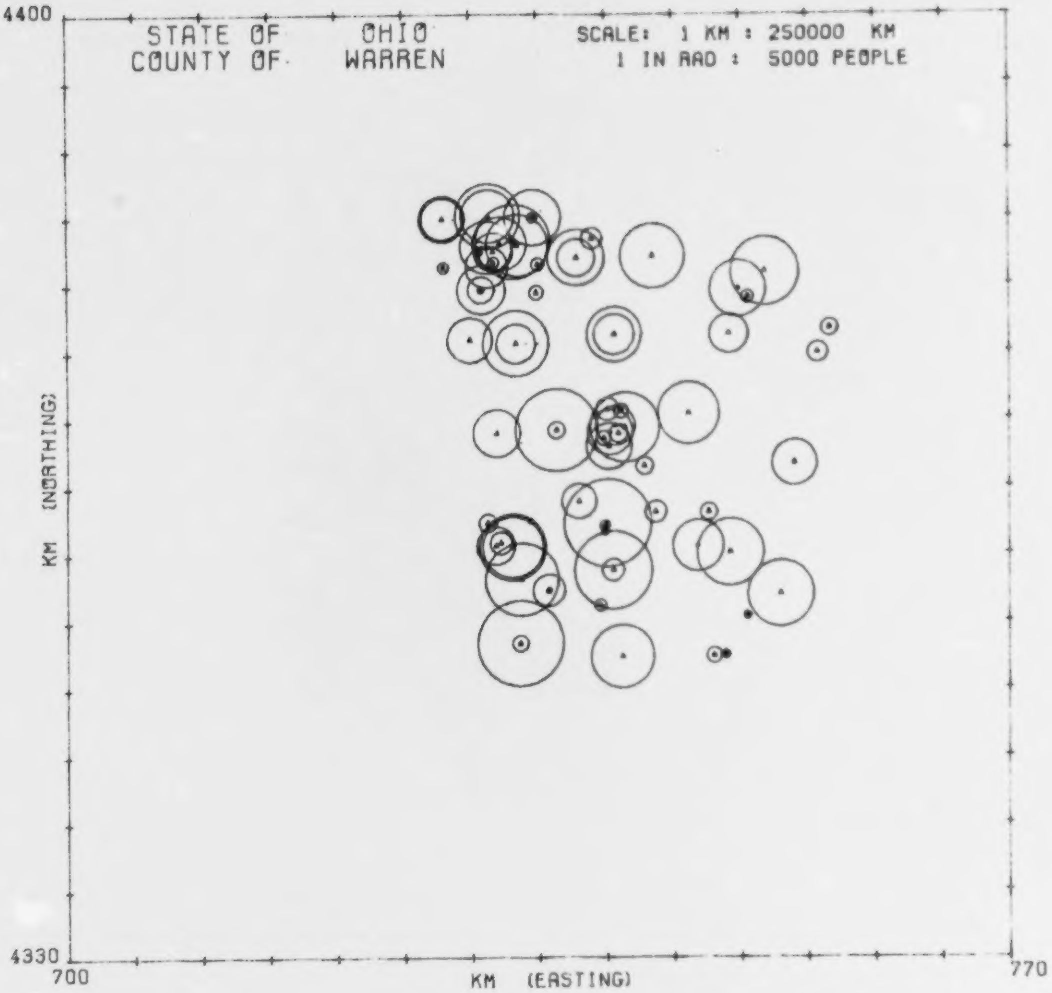


Figure 6u. CAASE 2 output for Warren County

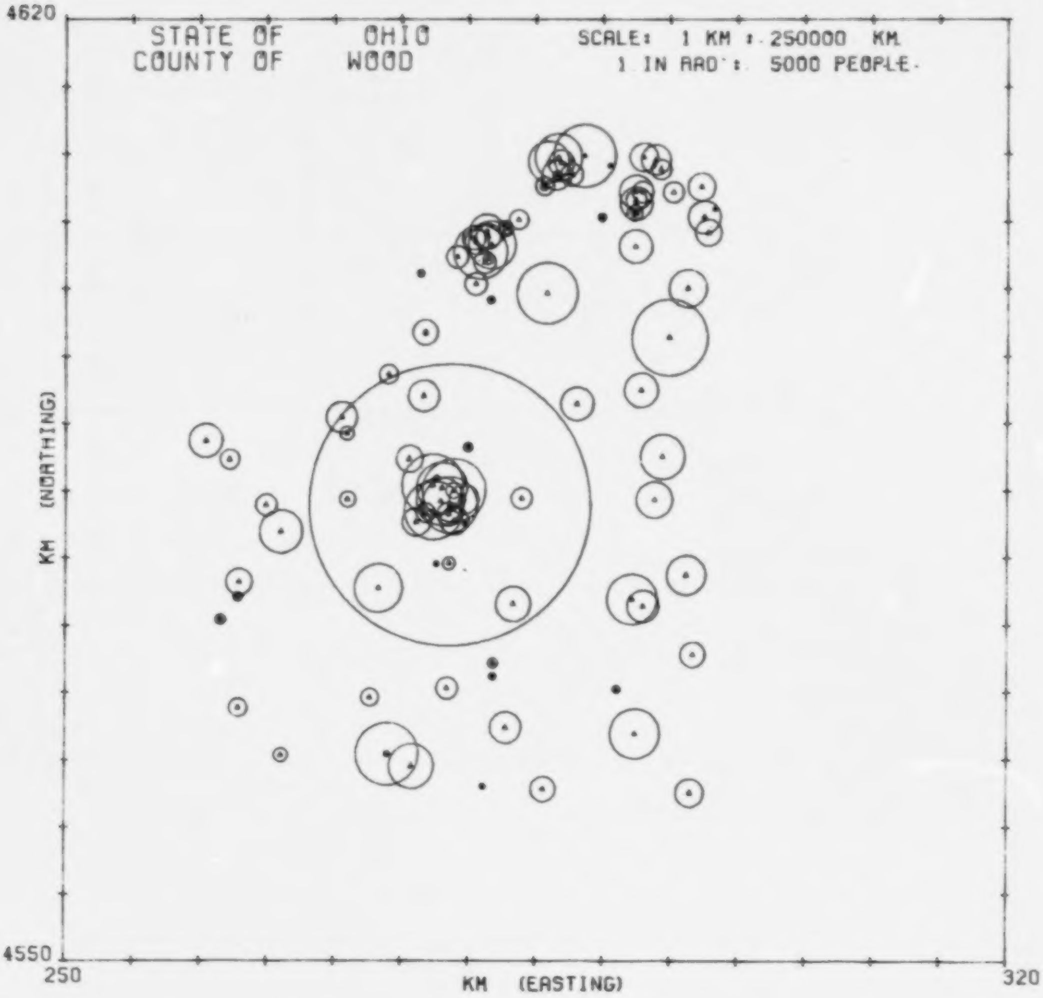

4620
STATE OF OHIO
COUNTY OF WOOD
SCALE: 1 KM : 250000 KM
1 IN RAD : 5000 PEOPLE
KM (NORTHING)
4550
250
KM (EASTING)
320

Figure 6v. CAASE 2 output for Wood County

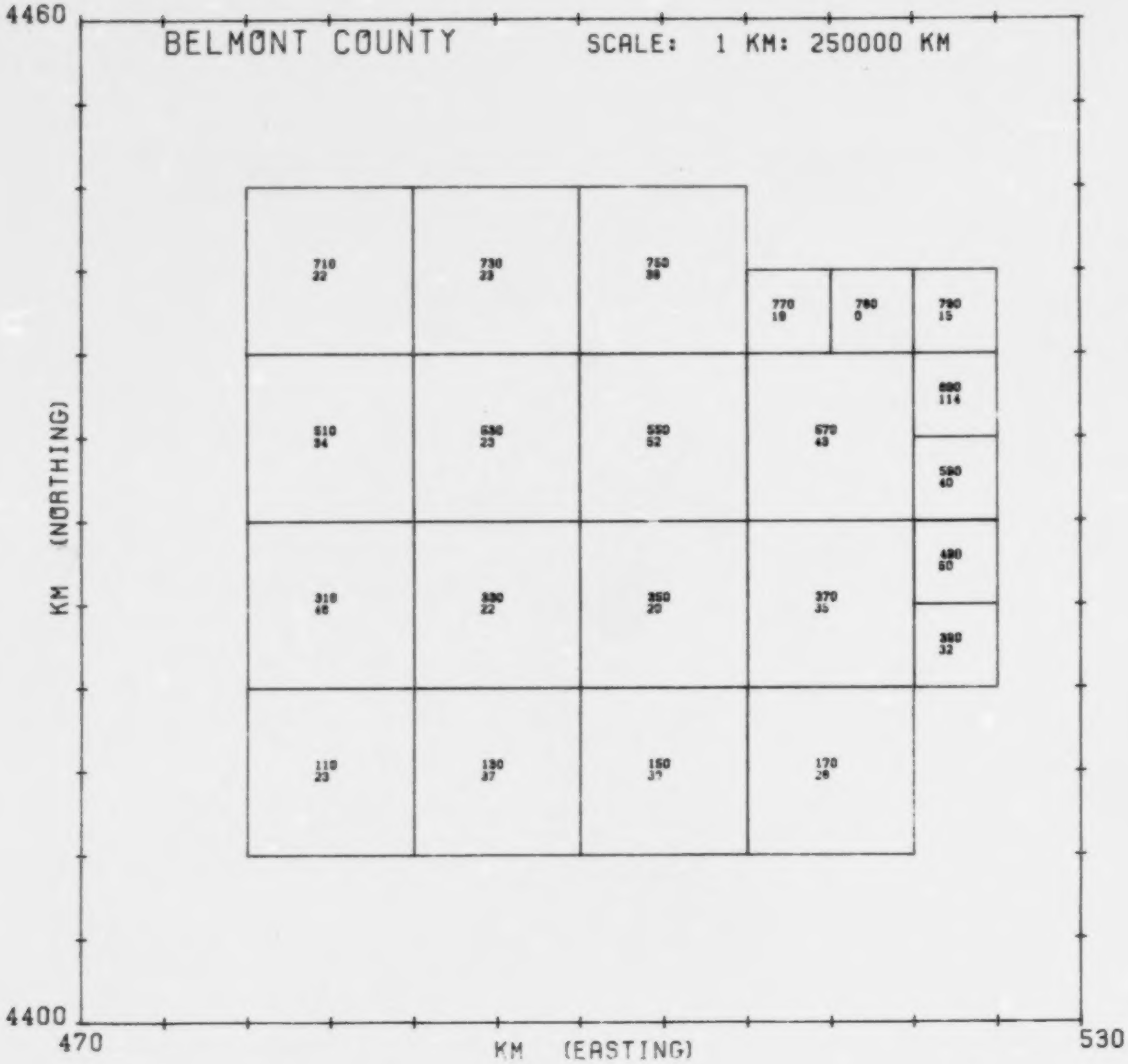

BELMONT COUNTY
SCALE: 1 KM: 250000 KM
4460
4400
470
530
KM (NORTHING)
KM (EASTING)
710
22
730
23
750
38
770
19
780
0
790
15
510
34
530
23
550
52
570
43
690
114
590
40
310
48
330
22
350
20
370
35
490
60
390
32
110
23
130
37
150
37
170
28

Figure 7a. CAASE 3 output for Belmont County

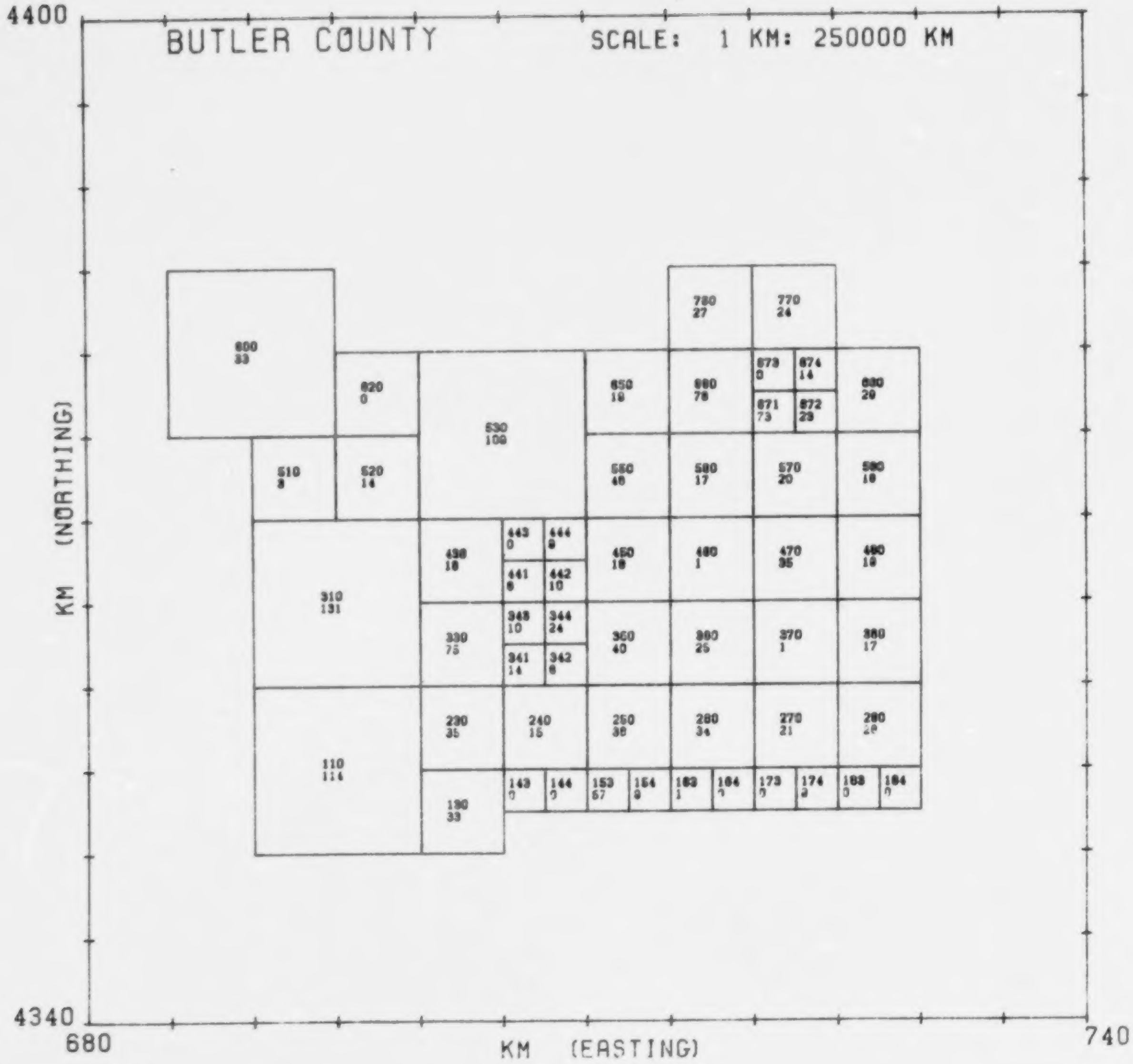

4400
BUTLER COUNTY
SCALE: 1 KM: 250000 KM
KM (NORTHING)
780
27
770
24
600
33
620
0
530
109
650
18
660
78
673
0
674
14
671
73
672
29
680
29
510
8
520
14
550
48
560
17
570
20
580
18
430
18
443
0
444
8
441
6
442
10
450
18
460
1
470
35
480
18
310
131
330
75
343
10
344
24
341
14
342
6
350
40
360
25
370
1
380
17
230
35
240
15
250
38
260
34
270
21
280
28
110
114
130
33
143
0
144
0
153
67
154
8
163
1
164
0
173
0
174
2
183
0
184
0
4340
680
KM (EASTING)
740

Figure 7b. CAASE 3 output for Butler County

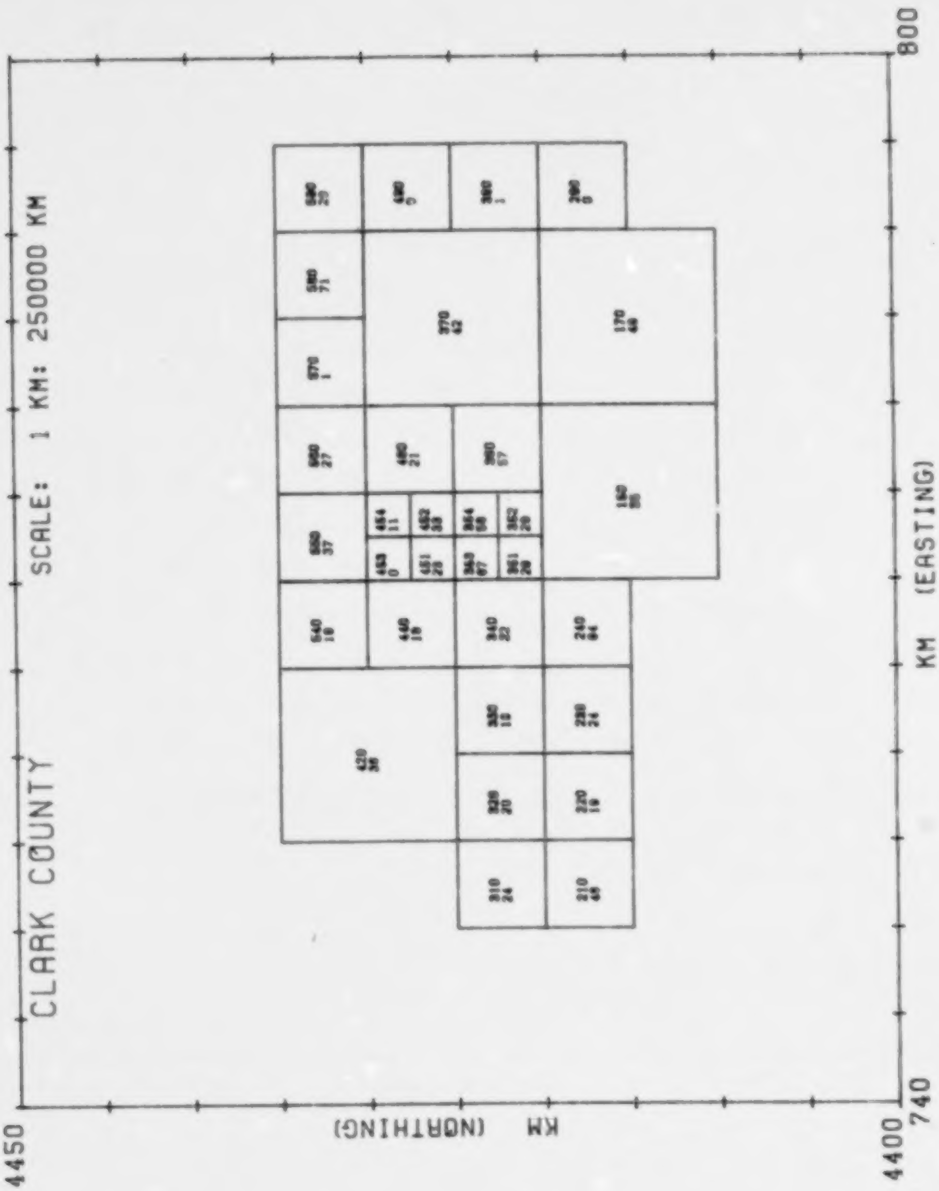

CLARK COUNTY
SCALE: 1 KM: 250000 KM
KM (EASTING)
KM (NORTHING)
4450
4400
740
800

Figure 7c. CAASE 3 output for Clark County

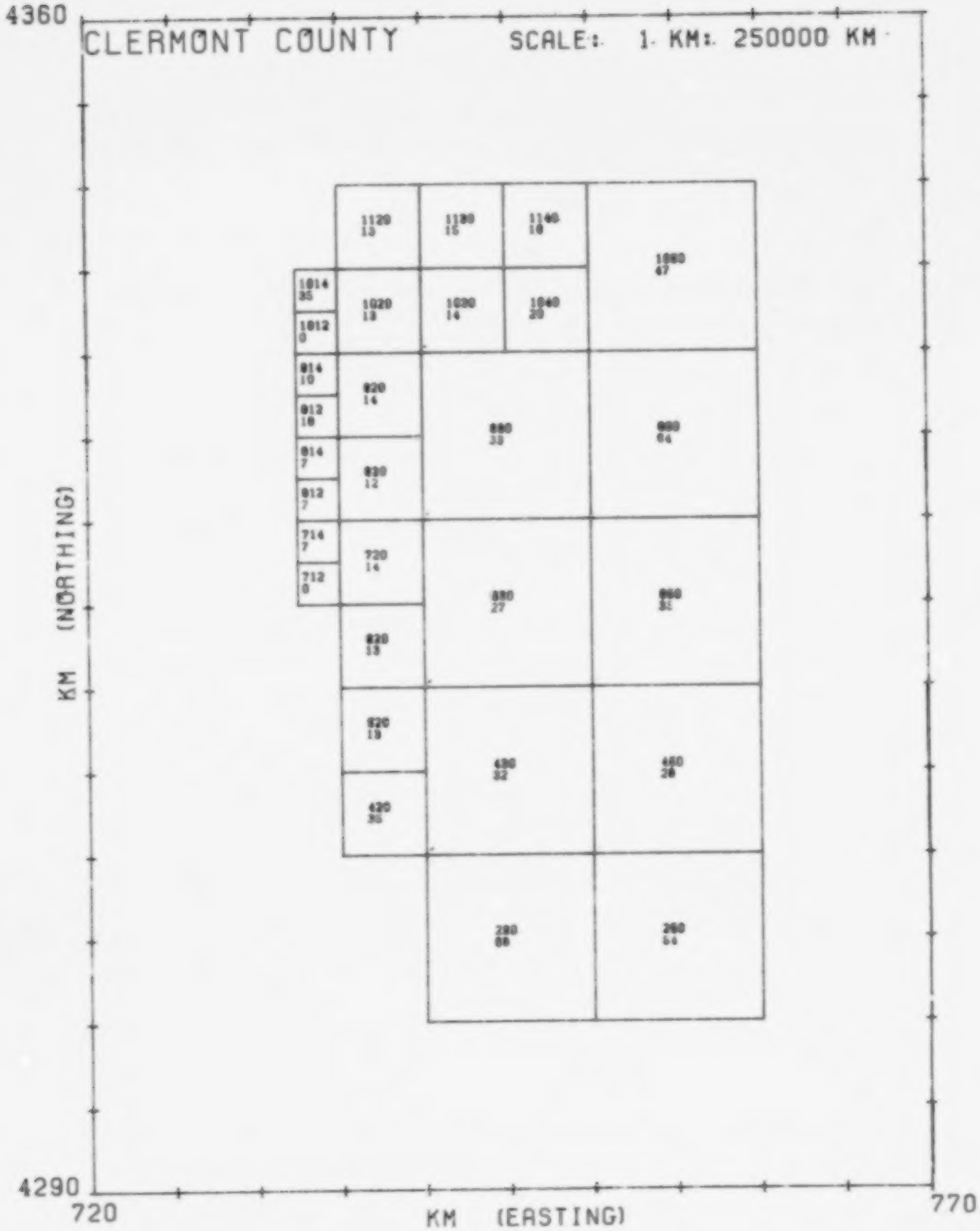

4360
CLERMONT COUNTY
SCALE: 1 KM: 250000 KM
1120
13
1130
15
1140
18
1080
47
1014
35
1012
0
1020
13
1030
14
1040
20
814
10
812
18
820
14
880
33
880
64
814
7
812
7
830
12
714
7
712
0
720
14
880
27
860
31
620
13
520
13
420
35
480
32
460
26
280
88
260
64
KM (NORTHING)
4290
720
KM (EASTING)
770

Figure 7d. CAASE 3 output for Clermont County

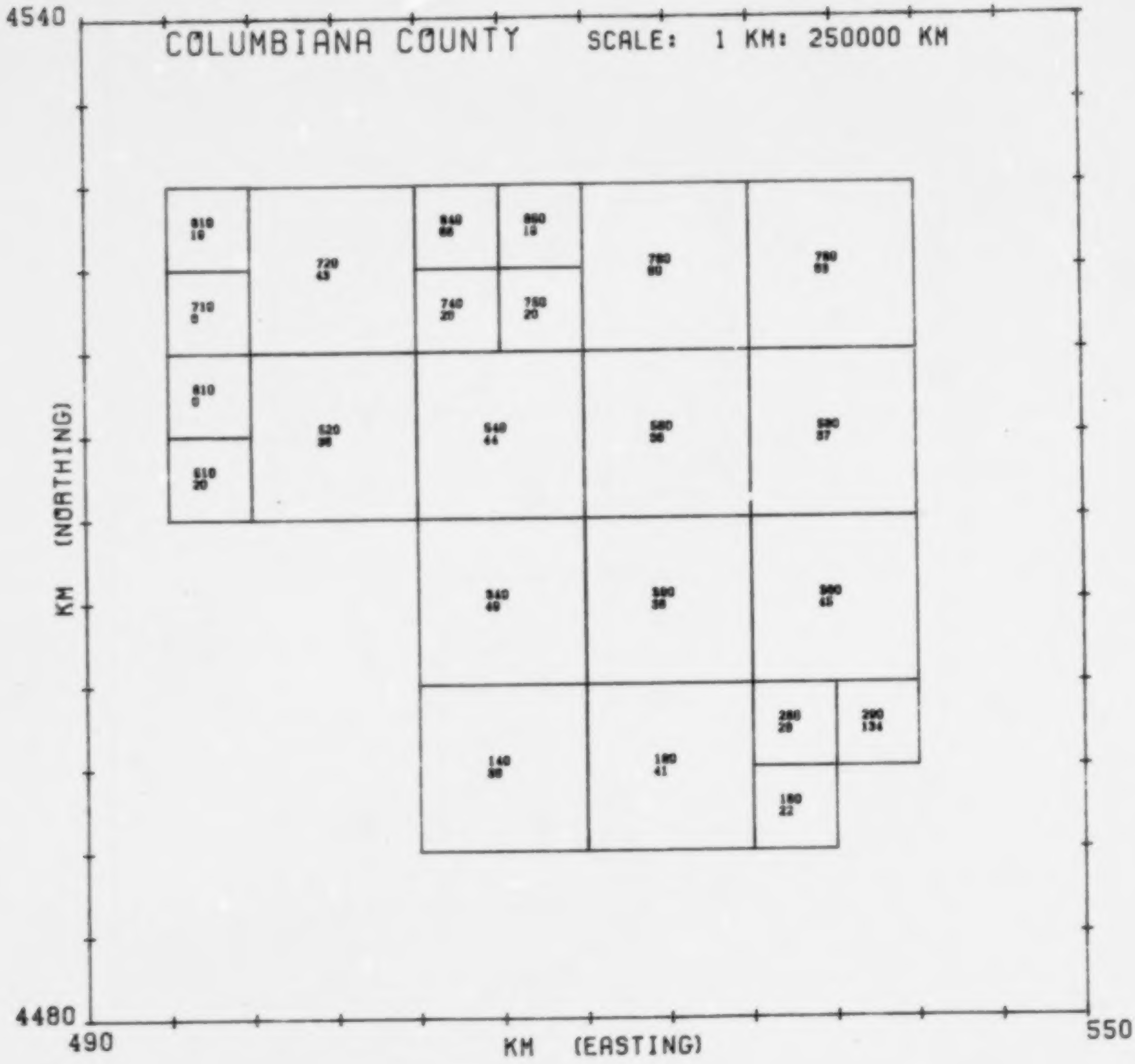

COLUMBIANA COUNTY
SCALE: 1 KM: 250000 KM
4540
4480
490
550
KM (NORTHING)
KM (EASTING)
810
16
720
43
840
66
860
16
780
60
790
63
710
0
740
20
750
20
810
0
620
38
640
44
680
36
690
37
610
20
340
49
380
38
390
45
280
28
290
134
140
88
180
41
180
22

Figure 7e. CAASE 3 output for Columbiana County

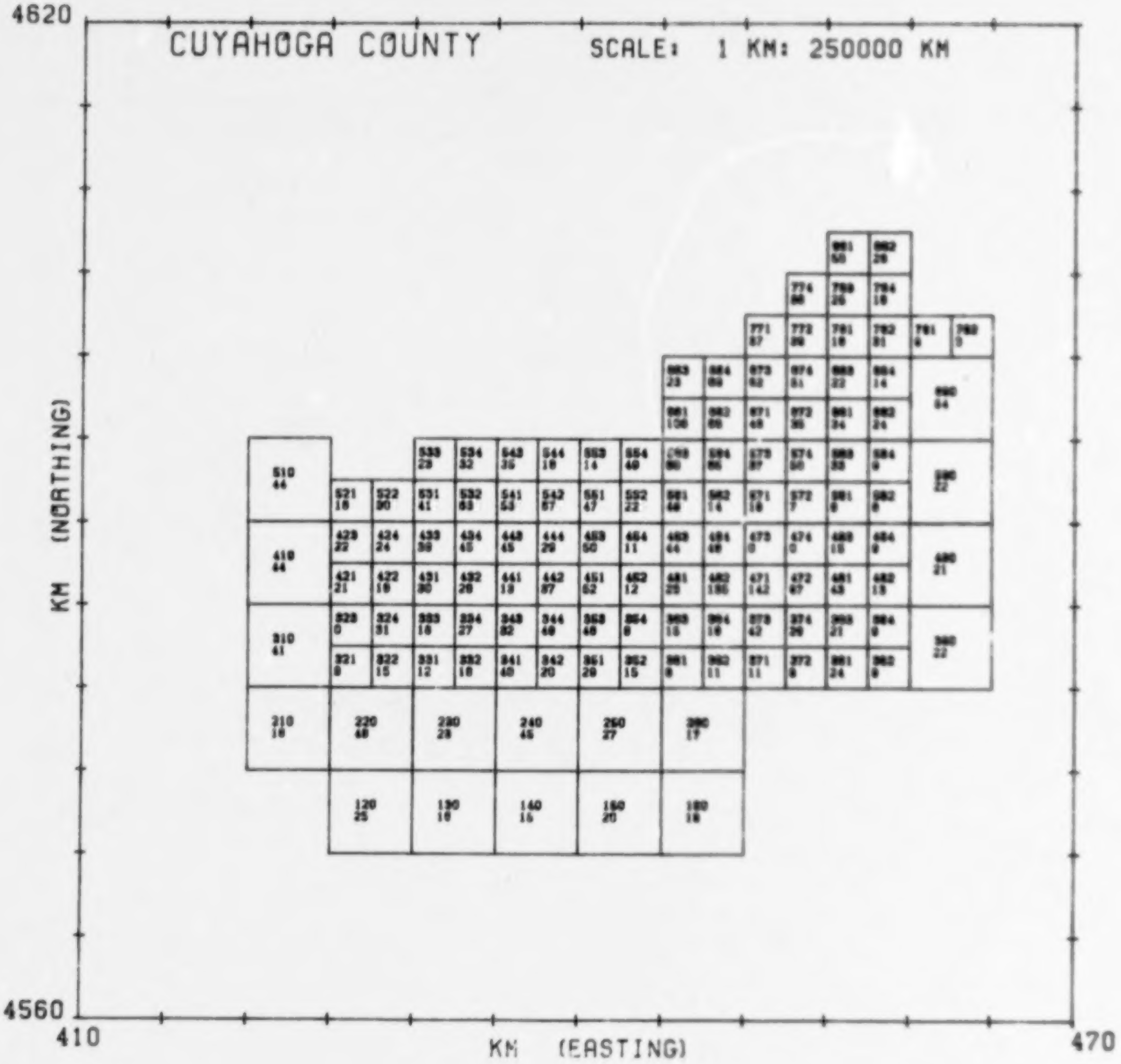

CUYAHOGA COUNTY
SCALE: 1 KM: 250000 KM
4620
4560
410
470
KM (NORTHING)
KM (EASTING)
510
44
410
44
310
41
210
16
220
48
230
28
240
46
250
27
260
17
120
25
130
16
140
16
150
20
160
16

Figure 7f. CAASE 3 output for Cuyahoga County

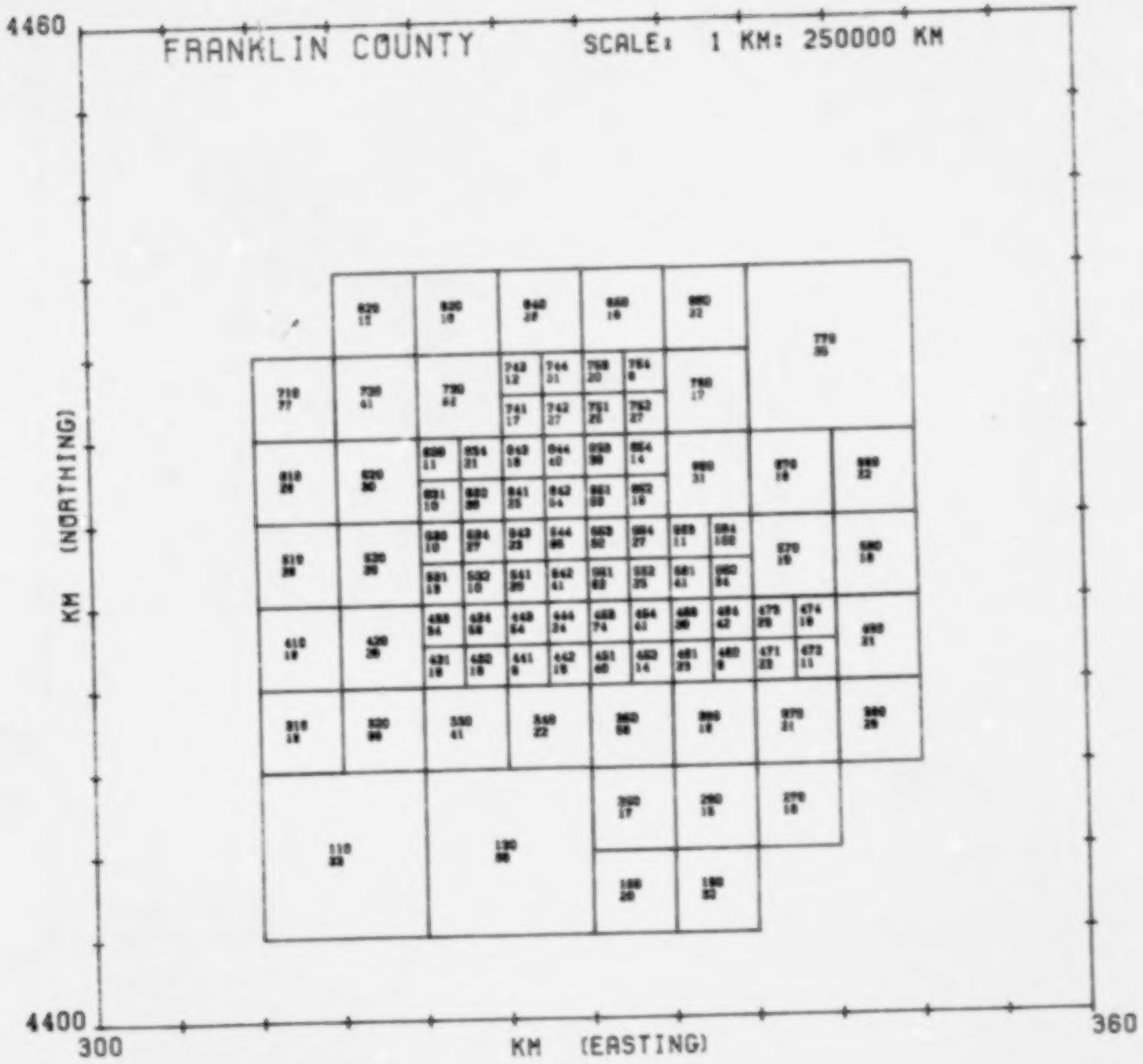

FRANKLIN COUNTY
SCALE: 1 KM: 250000 KM
4460
4400
300
360
KM (NORTHING)
KM (EASTING)

Figure 7g. CAASE 3 output for Franklin County

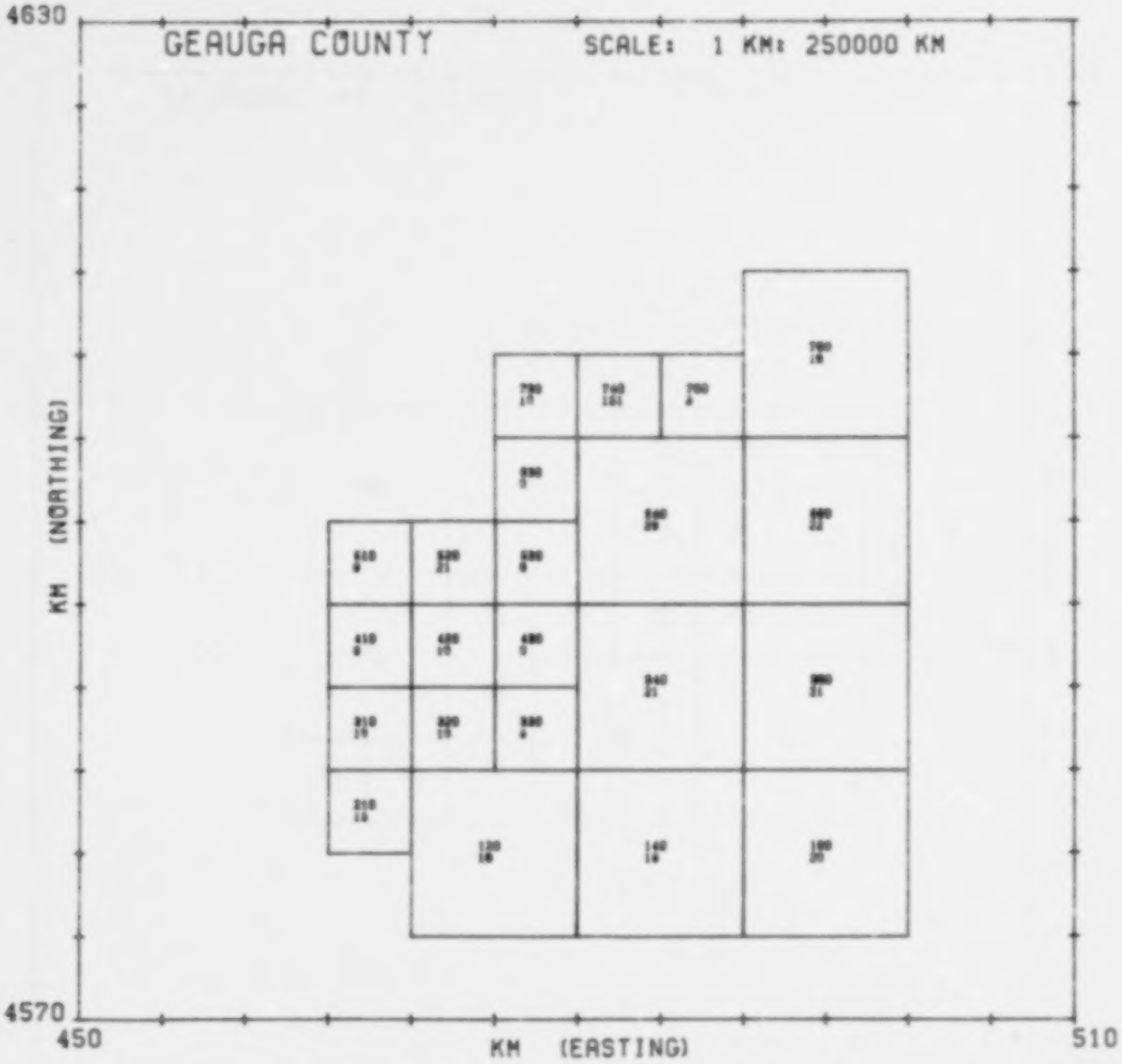

GEAUGA COUNTY
SCALE: 1 KM: 250000 KM
4630
4570
450
510
KM (NORTHING)
KM (EASTING)

Figure 7h. CAASE 3 output for Geauga County

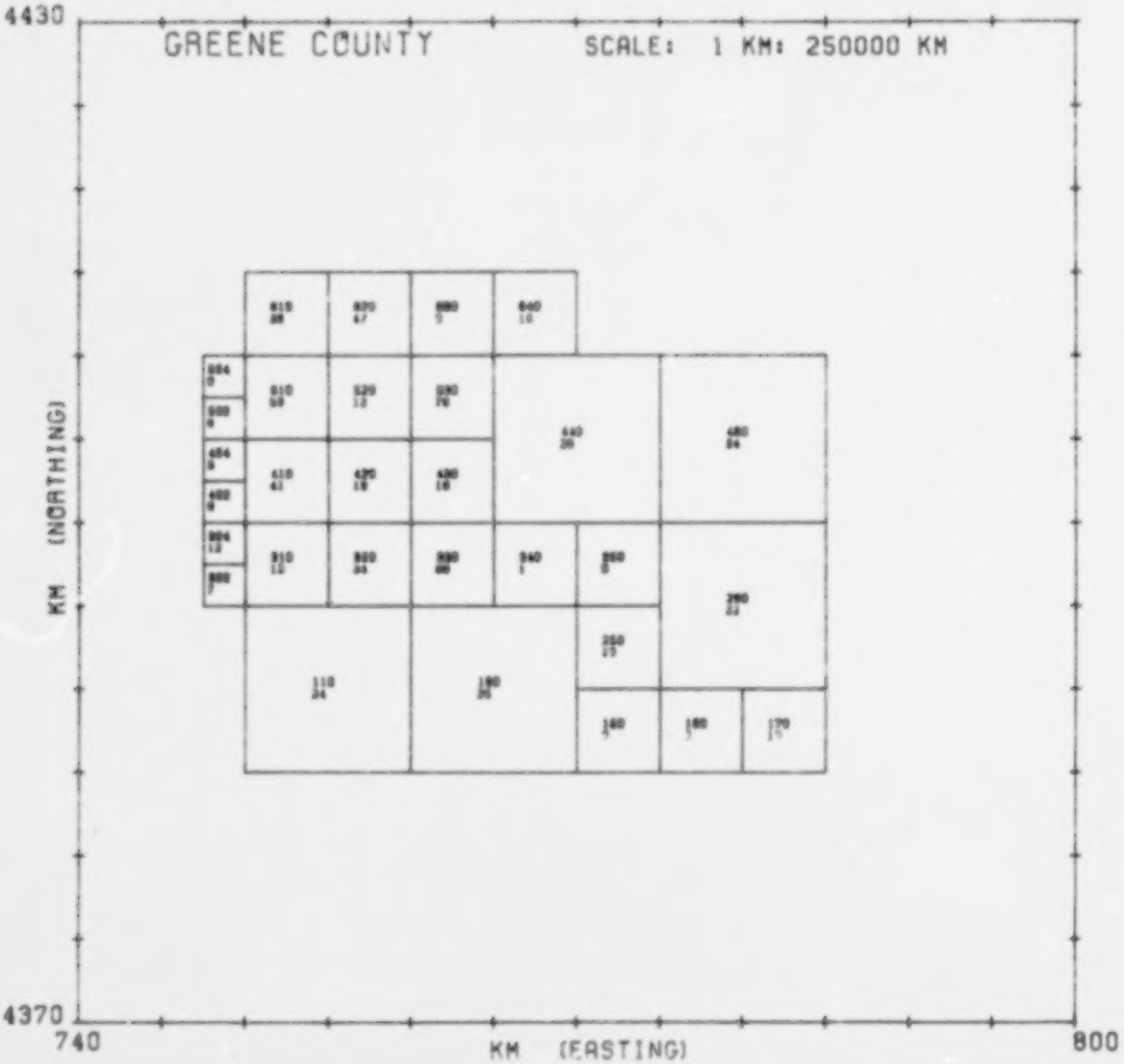

GREENE COUNTY
SCALE: 1 KM: 250000 KM
4430
4370
740
800
KM (NORTHING)
KM (EASTING)

Figure 7i. CAASE 3 output for Greene County

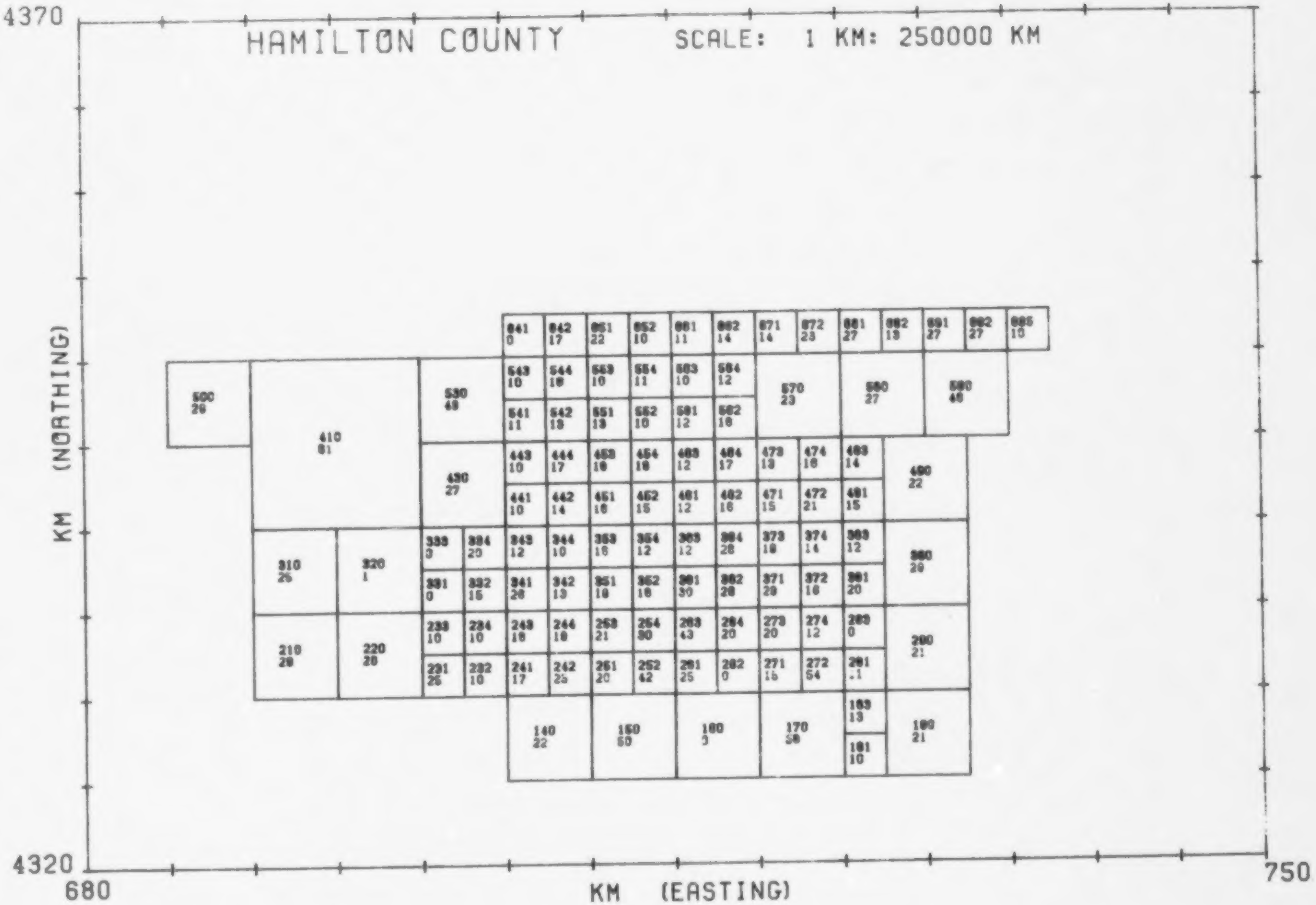

HAMILTON COUNTY
SCALE: 1 KM: 250000 KM
4370
4320
680
750
KM (NORTHING)
KM (EASTING)

Figure 7j. CAASE 3 output for Hamilton County

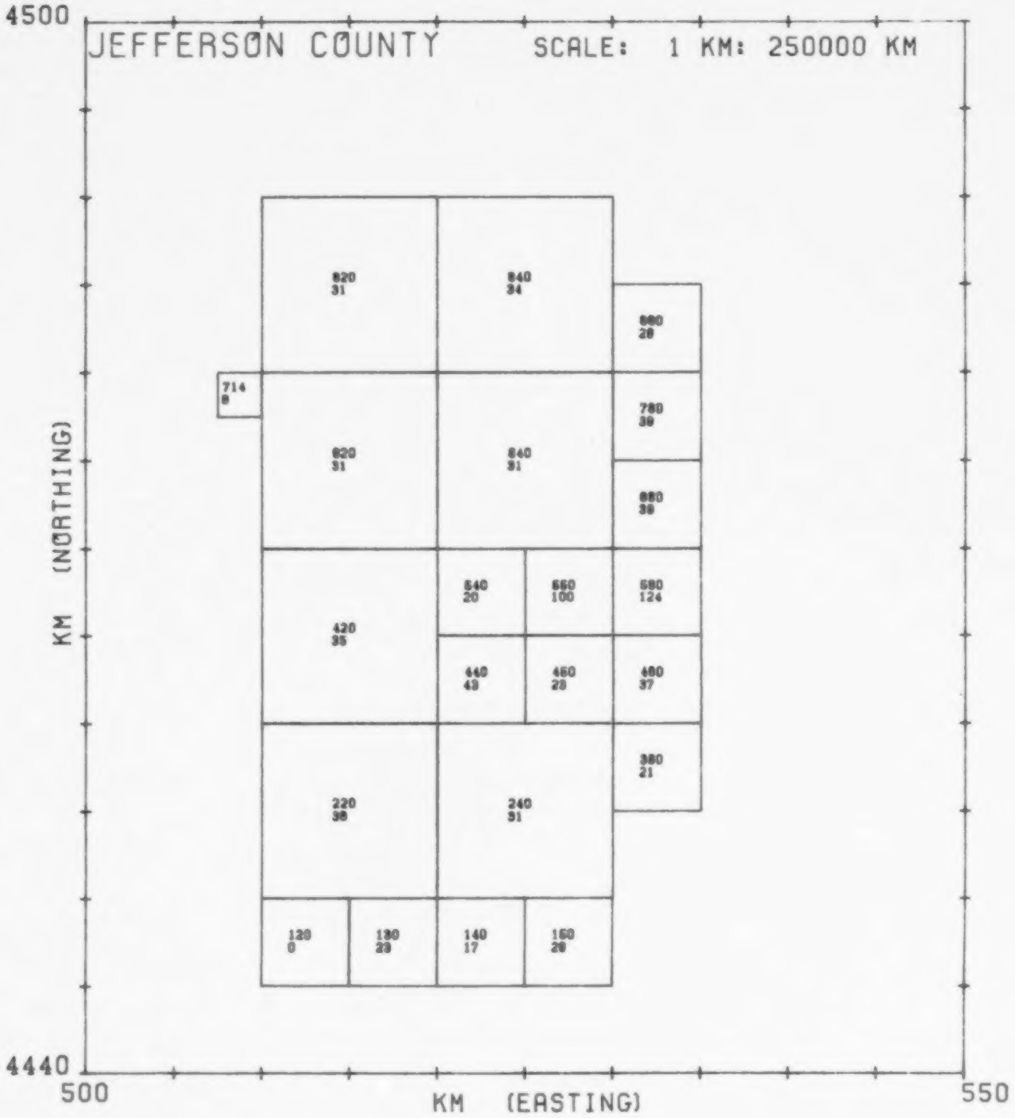

JEFFERSON COUNTY
SCALE: 1 KM: 250000 KM
4500
4440
500
550
KM (NORTHING)
KM (EASTING)
820
31
840
34
880
28
714
8
620
31
640
31
780
30
680
38
420
35
540
20
560
100
580
124
440
43
460
28
480
37
380
21
220
38
240
31
120
0
130
23
140
17
160
26

Figure 7k. CAASE 3 output for Jefferson County

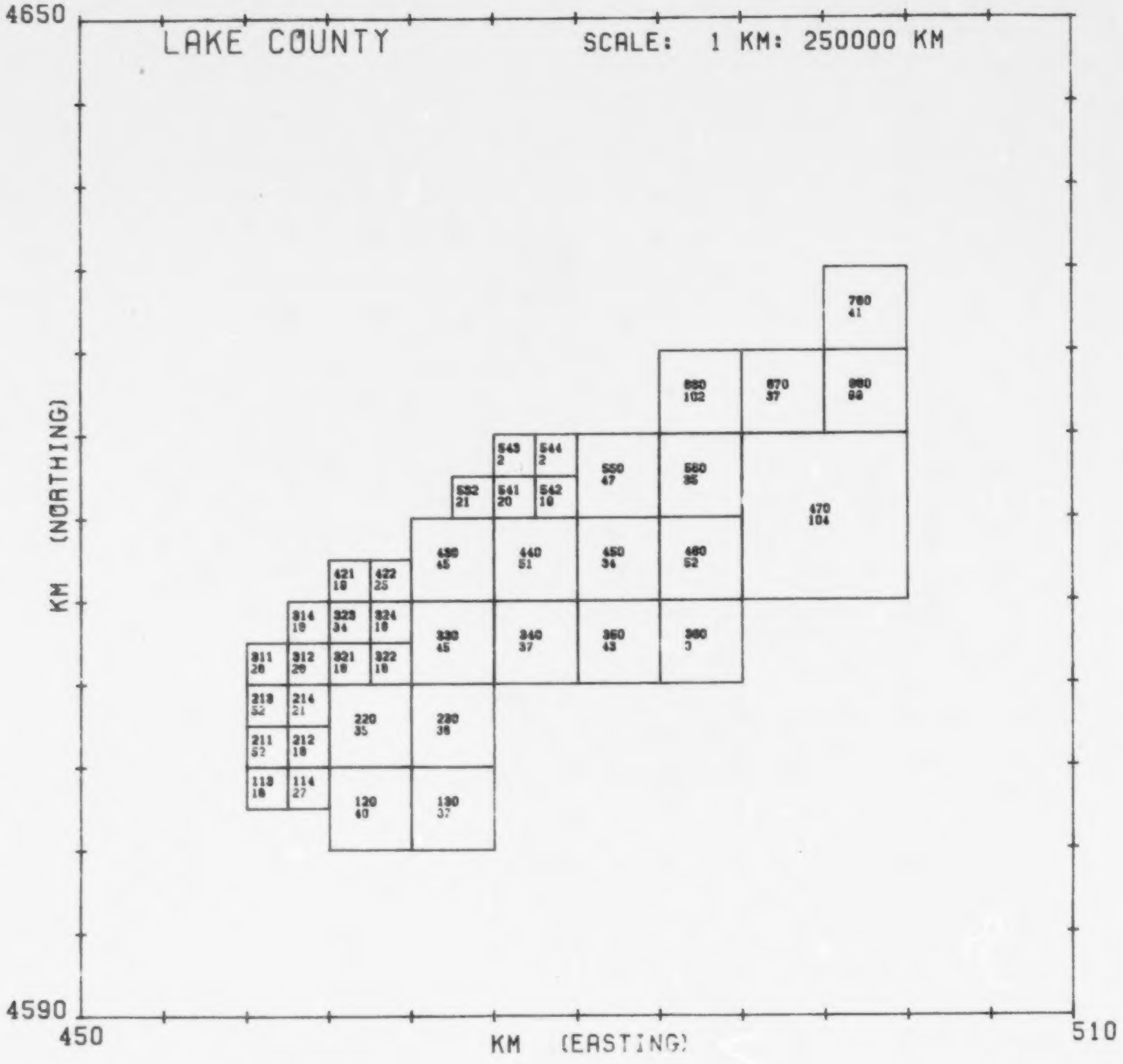

LAKE COUNTY
SCALE: 1 KM: 250000 KM
4650
4590
450
510
KM (NORTHING)
KM (EASTING)
780
41
660
102
670
37
680
99
543
2
544
2
550
47
560
35
532
21
541
20
542
19
470
104
430
45
440
51
450
34
460
52
421
18
422
25
314
19
323
34
324
18
330
45
340
37
350
43
360
3
311
20
312
20
321
19
322
19
213
52
214
21
220
35
230
38
211
52
212
18
113
18
114
27
120
40
130
37

Figure 7*l*. CAASE 3 output for Lake County

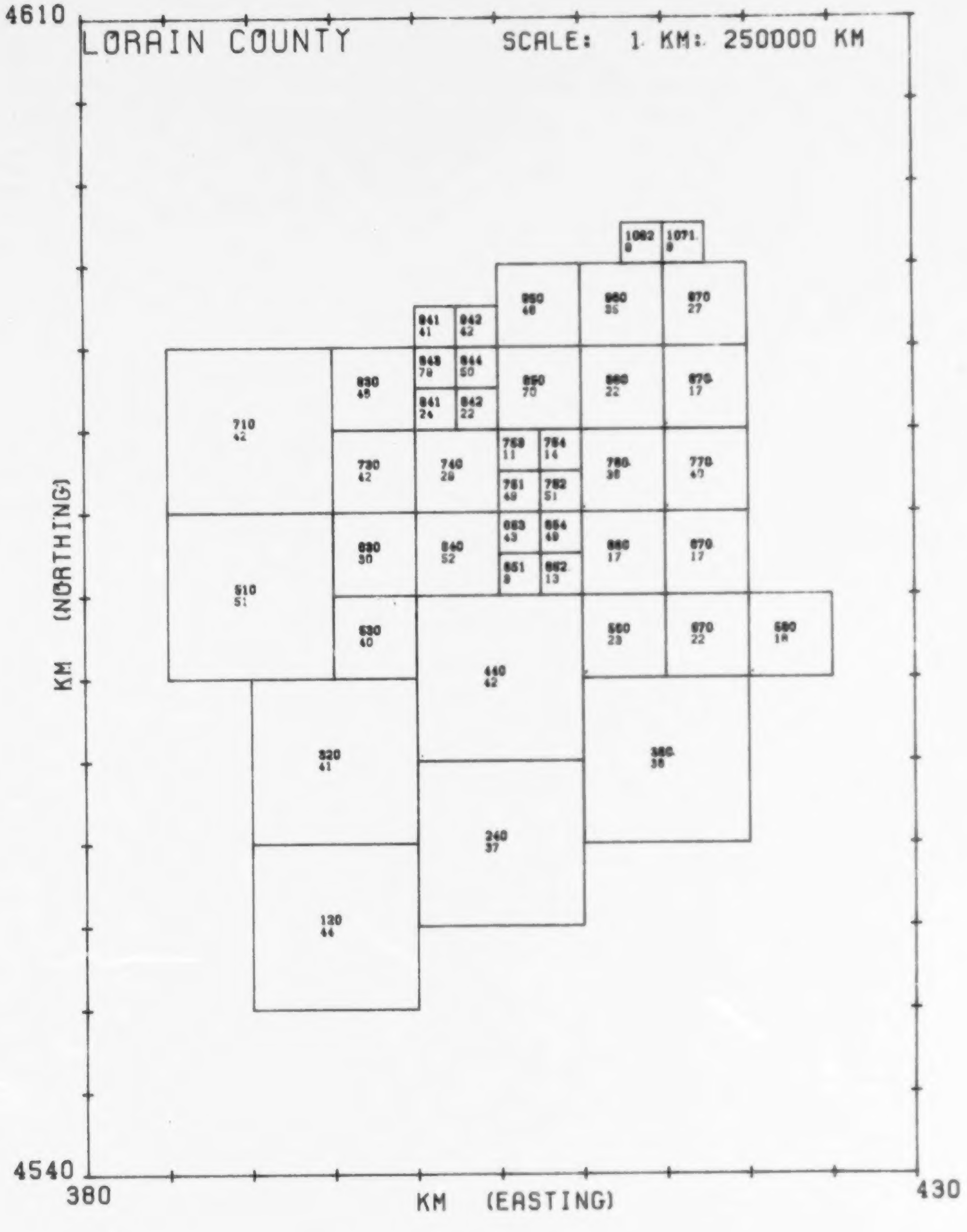

LORAIN COUNTY
SCALE: 1 KM: 250000 KM
4610
4540
380
430
KM (NORTHING)
KM (EASTING)
1062 8
1071 8
950 48
960 35
970 27
941 41
942 42
843 78
844 50
841 24
842 22
830 45
850 70
860 22
870 17
710 42
730 42
740 28
753 11
754 14
751 48
752 51
760 38
770 43
630 30
640 52
653 43
654 48
651 8
652 13
660 17
670 17
510 51
530 40
560 23
570 22
580 18
440 42
320 41
380 38
240 37
120 44

Figure 7m. CAASE 3 output for Lorain County

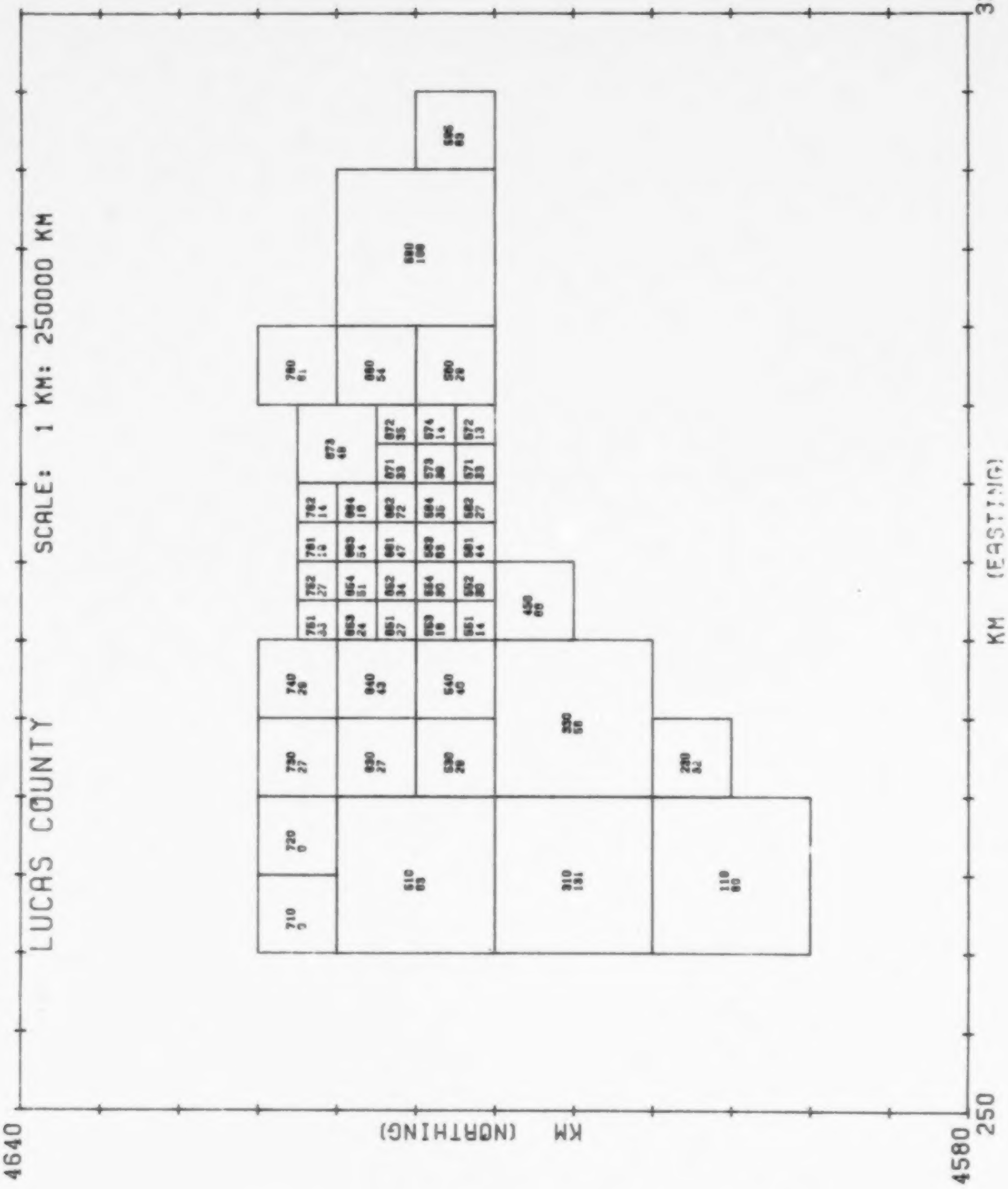

LUCAS COUNTY
SCALE: 1 KM: 250000 KM
KM (NORTHING)
KM (EASTING)
4640
4580
250
320

Figure 7n. CAASE 3 output for Lucas County

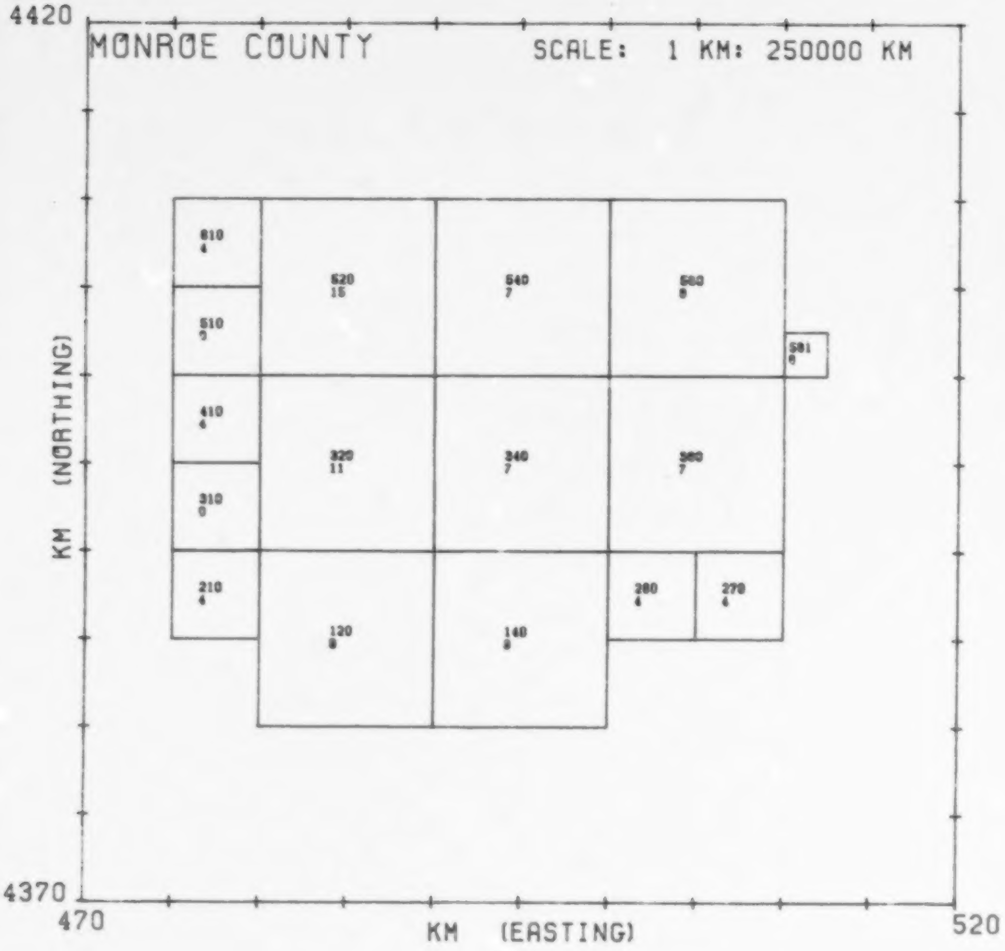

4420
MONROE COUNTY
SCALE: 1 KM: 250000 KM
610
4
520
15
540
7
560
8
510
9
581
0
410
4
320
11
340
7
360
7
310
0
210
4
120
8
140
8
280
4
270
4
KM (NORTHING)
4370
470
KM (EASTING)
520

Figure 7o. CAASE 3 output for Monroe County

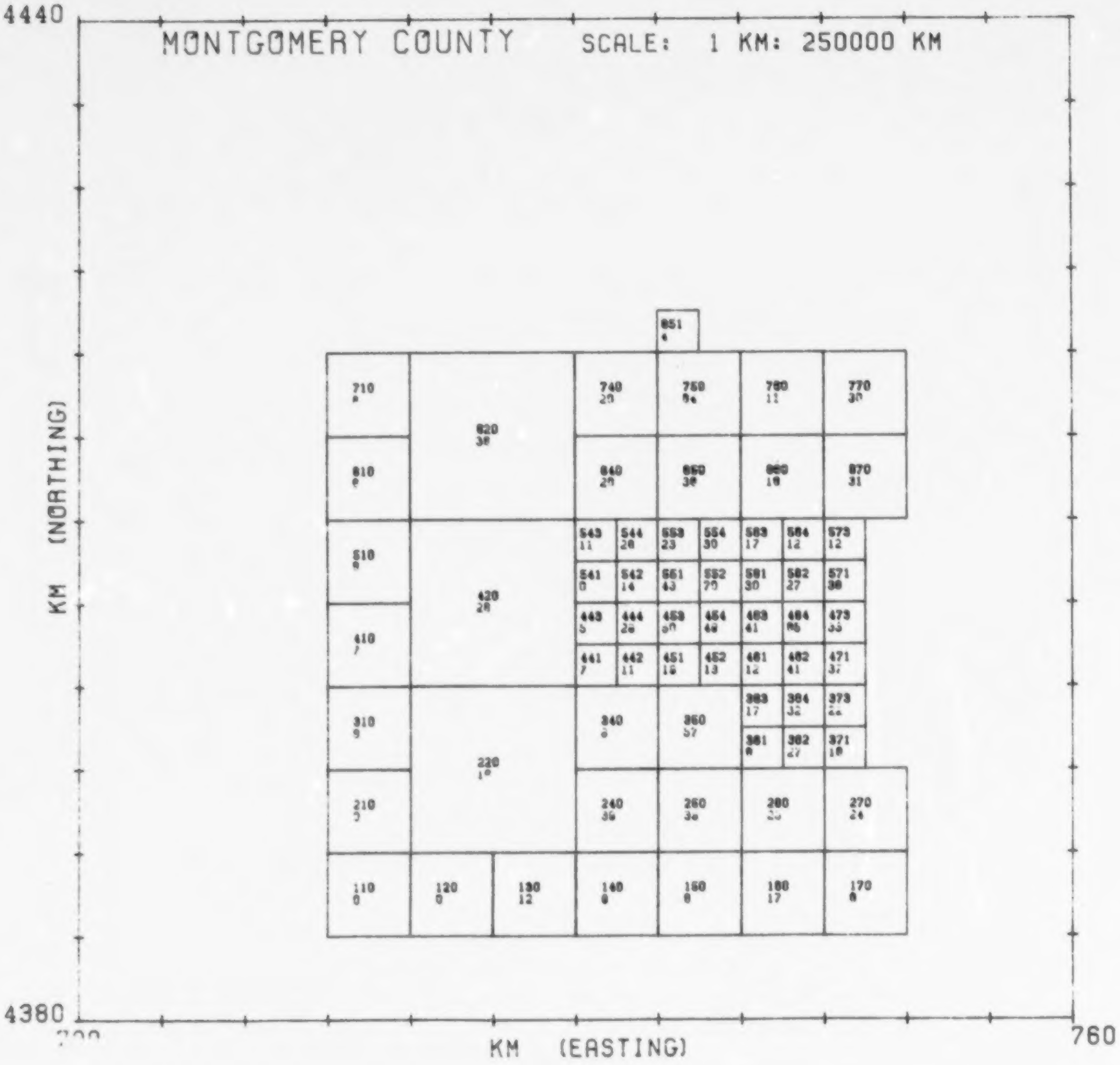
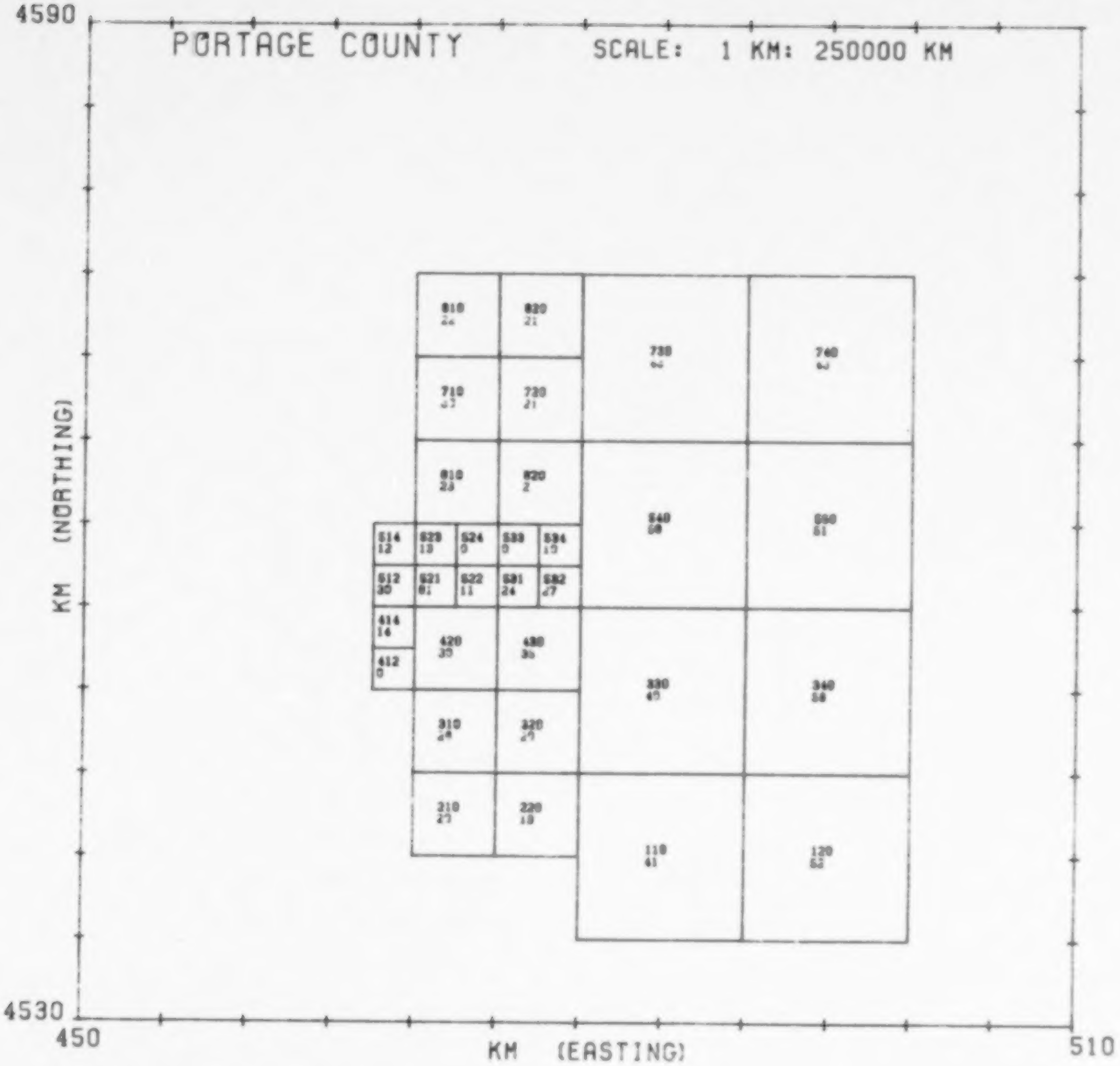

4440
4380
760
MONTGOMERY COUNTY
SCALE: 1 KM: 250000 KM
KM (NORTHING)
KM (EASTING)
851
710
820 38
740 20
750
760 11
770 30
810
840 29
850 38
860 18
870 31
543 11
544 28
553 23
554 30
563 17
564 12
573 12
510
541 0
542 14
551 43
552 79
561 30
562 27
571 38
420 28
443 5
444
453
454 48
463 41
464
473 33
410 7
441 7
442 11
451 16
452 13
461 12
462 41
471 37
363 17
364 32
373
310 9
340
350 57
361
362 27
371 18
220
210 3
240 36
250
260
270 24
110 0
120 0
130 12
140 8
150 8
160 17
170 8

Figure 7p. CAASE 3 output for Montgomery County



PORTAGE COUNTY
SCALE: 1 KM: 250000 KM
4590
4530
450
510
KM (NORTHING)
KM (EASTING)
810
820
710
720
730
740
610
620
640
650
514
12
523
13
524
0
533
0
534
512
30
521
522
11
531
24
532
414
14
412
0
420
430
330
340
310
320
210
220
110
41
120

Figure 7q. CAASE 3 output for Portage County

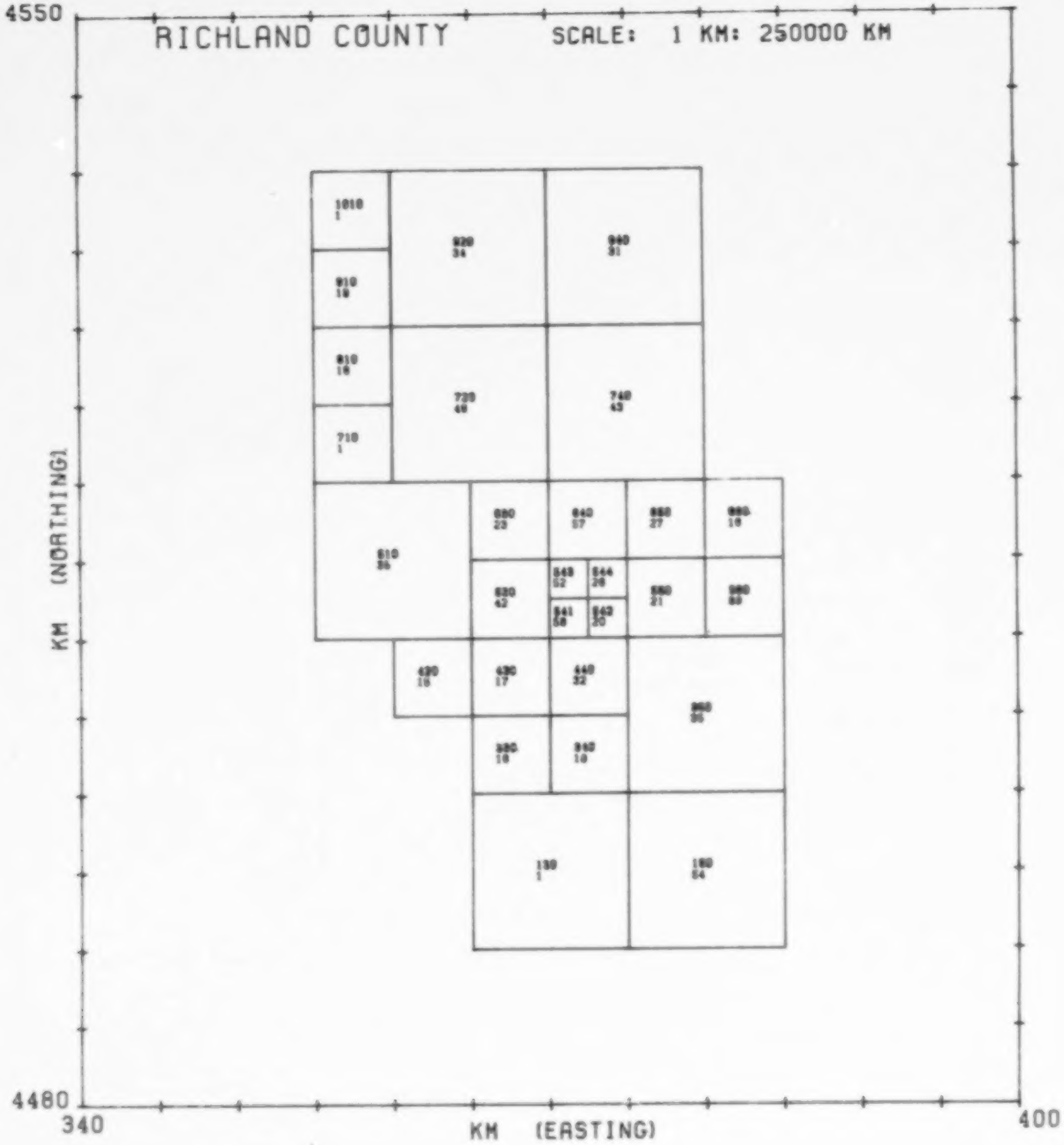

4550
RICHLAND COUNTY
SCALE: 1 KM: 250000 KM
1010
1
920
34
940
31
910
19
810
19
720
49
740
43
710
1
610
36
630
23
640
57
660
27
680
19
620
42
643
52
644
26
641
58
642
20
650
21
670
60
420
15
430
17
440
32
460
35
320
19
340
10
130
1
160
54
KM (NORTHING)
4480
340
KM (EASTING)
400

Figure 7r. CAASE 3 output for Richland County

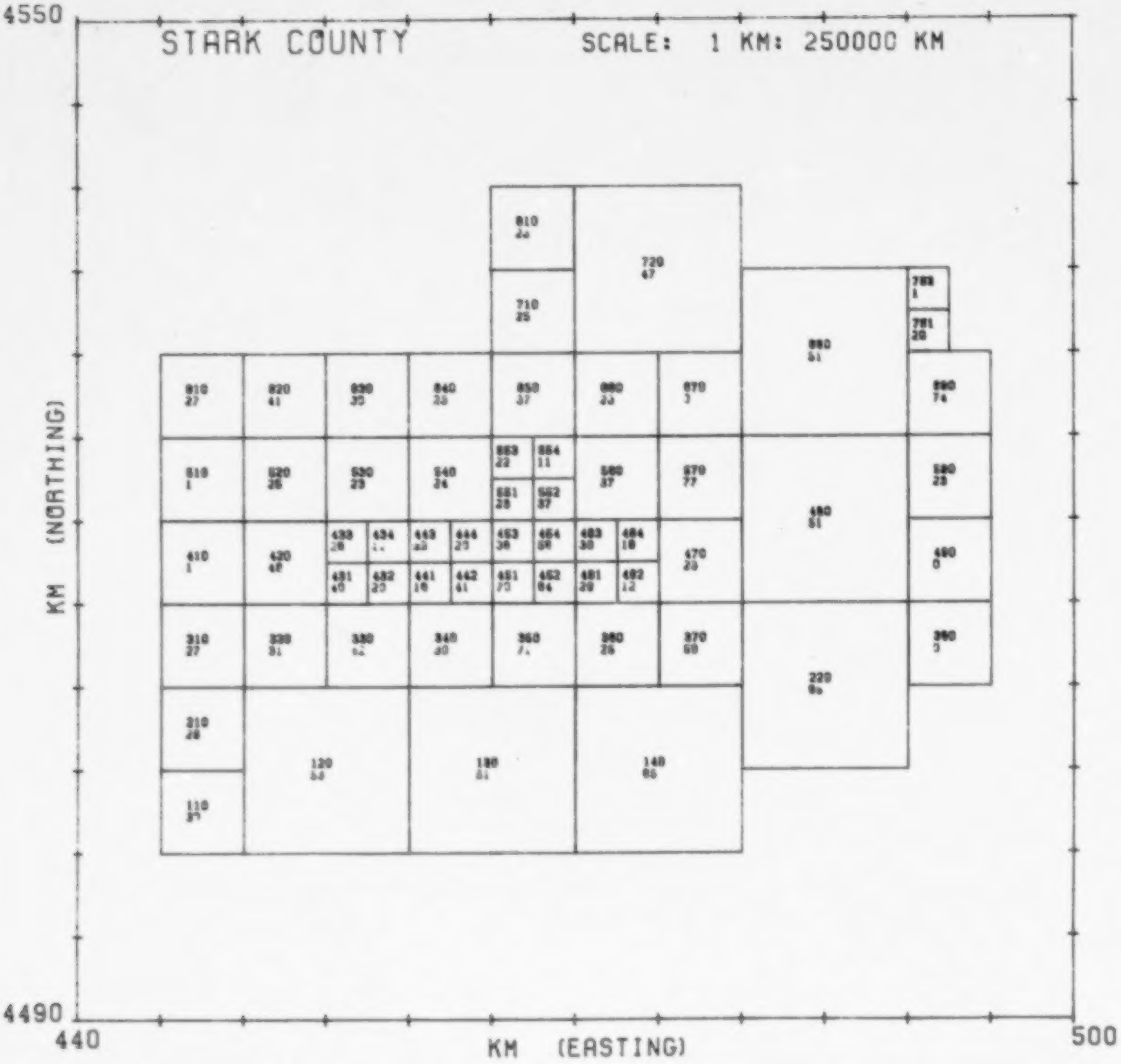

STARK COUNTY
SCALE: 1 KM: 250000 KM
4550
4490
440
500
KM (NORTHING)
KM (EASTING)

Figure 7s. CAASE 3 output for Stark County

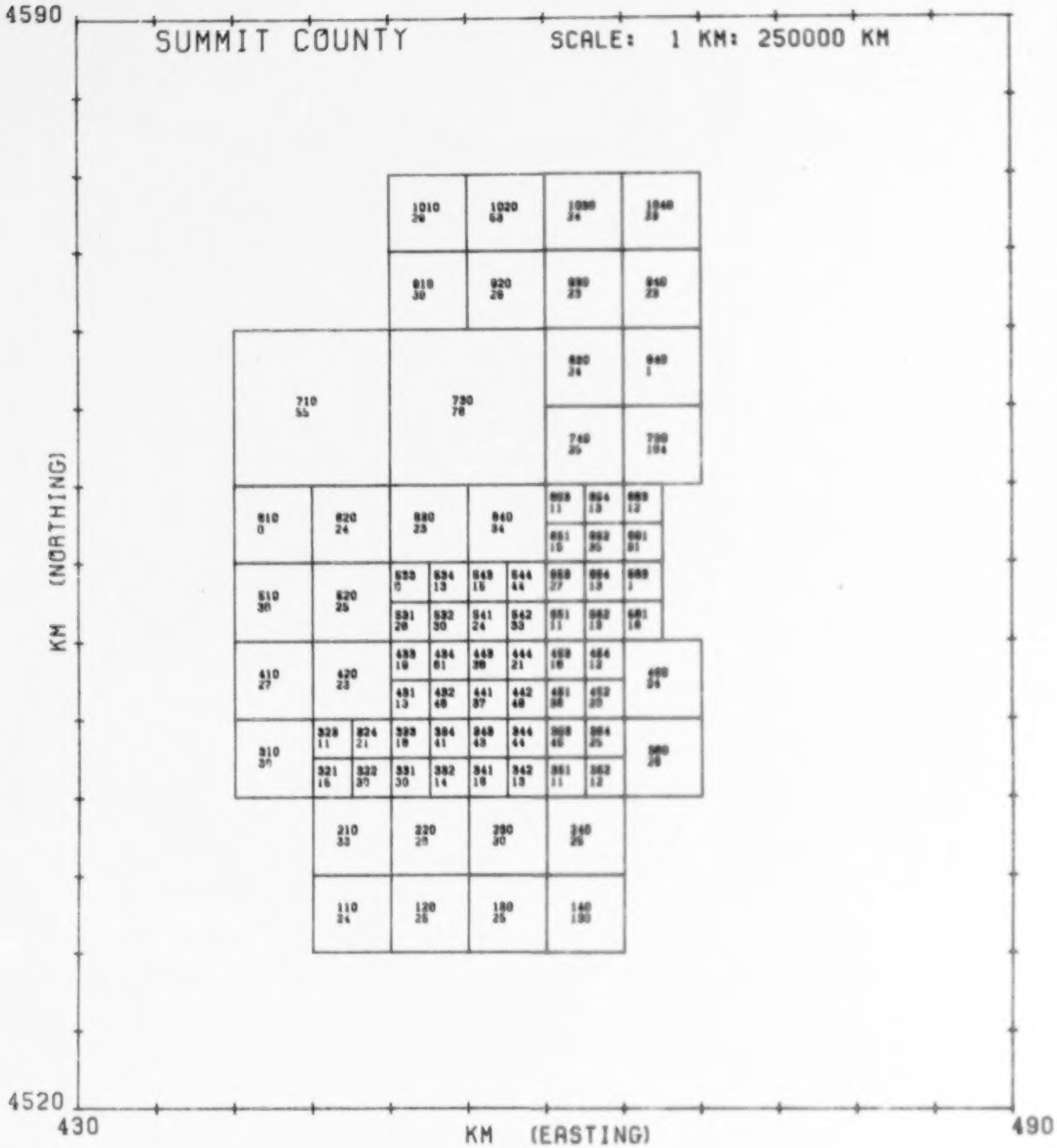

SUMMIT COUNTY
SCALE: 1 KM: 250000 KM
4590
4520
430
490
KM (NORTHING)
KM (EASTING)
710
55
730
78
510
30
410
27
310
30
210
33
110
24
120
25
140
130

Figure 7t. CAASE 3 output for Summit County

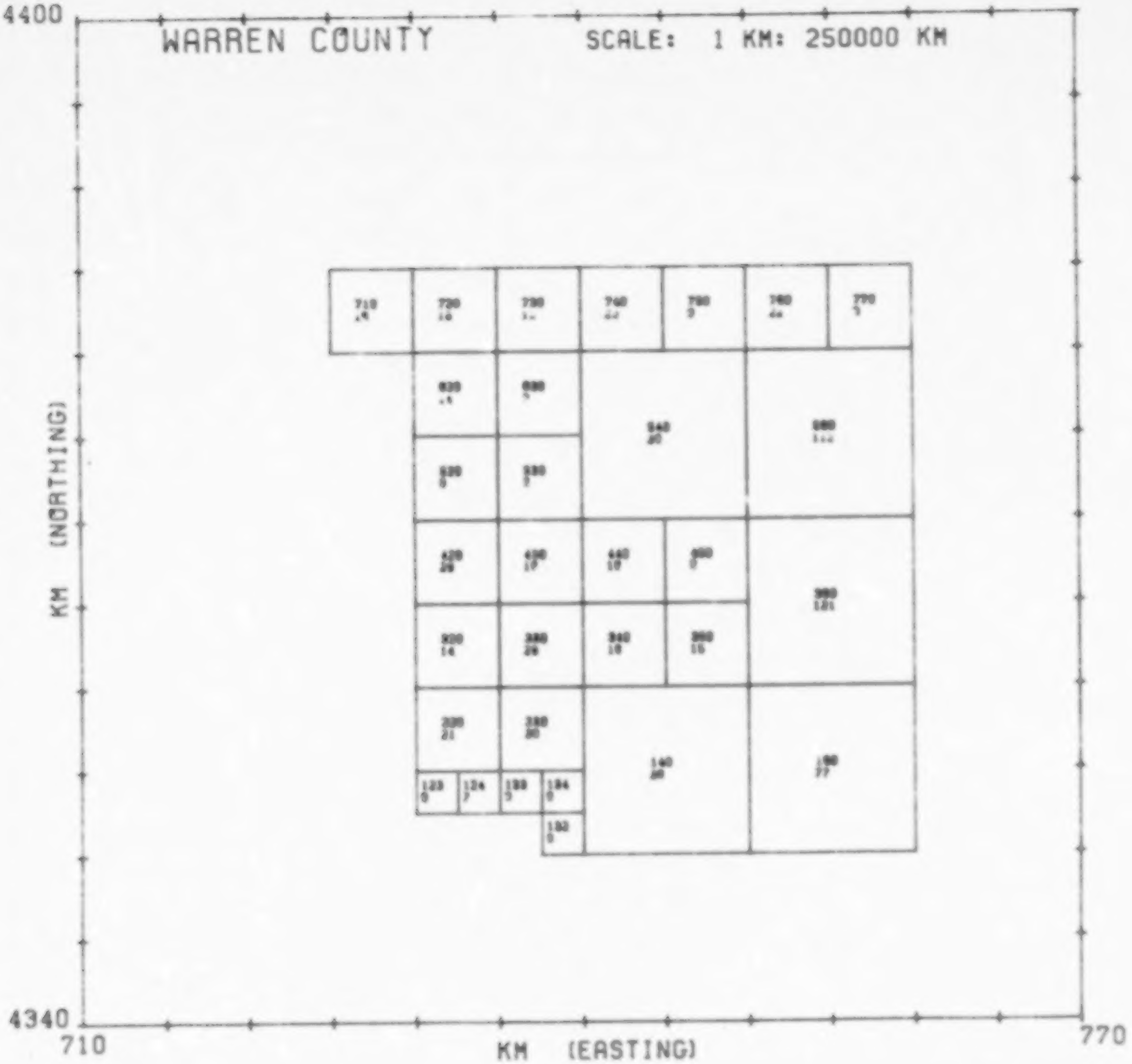

WARREN COUNTY
SCALE: 1 KM: 250000 KM
4400
4340
710
770
KM (NORTHING)
KM (EASTING)
710
720
770
123
124
134
132
140

Figure 7u. CAASE 3 output for Warren County

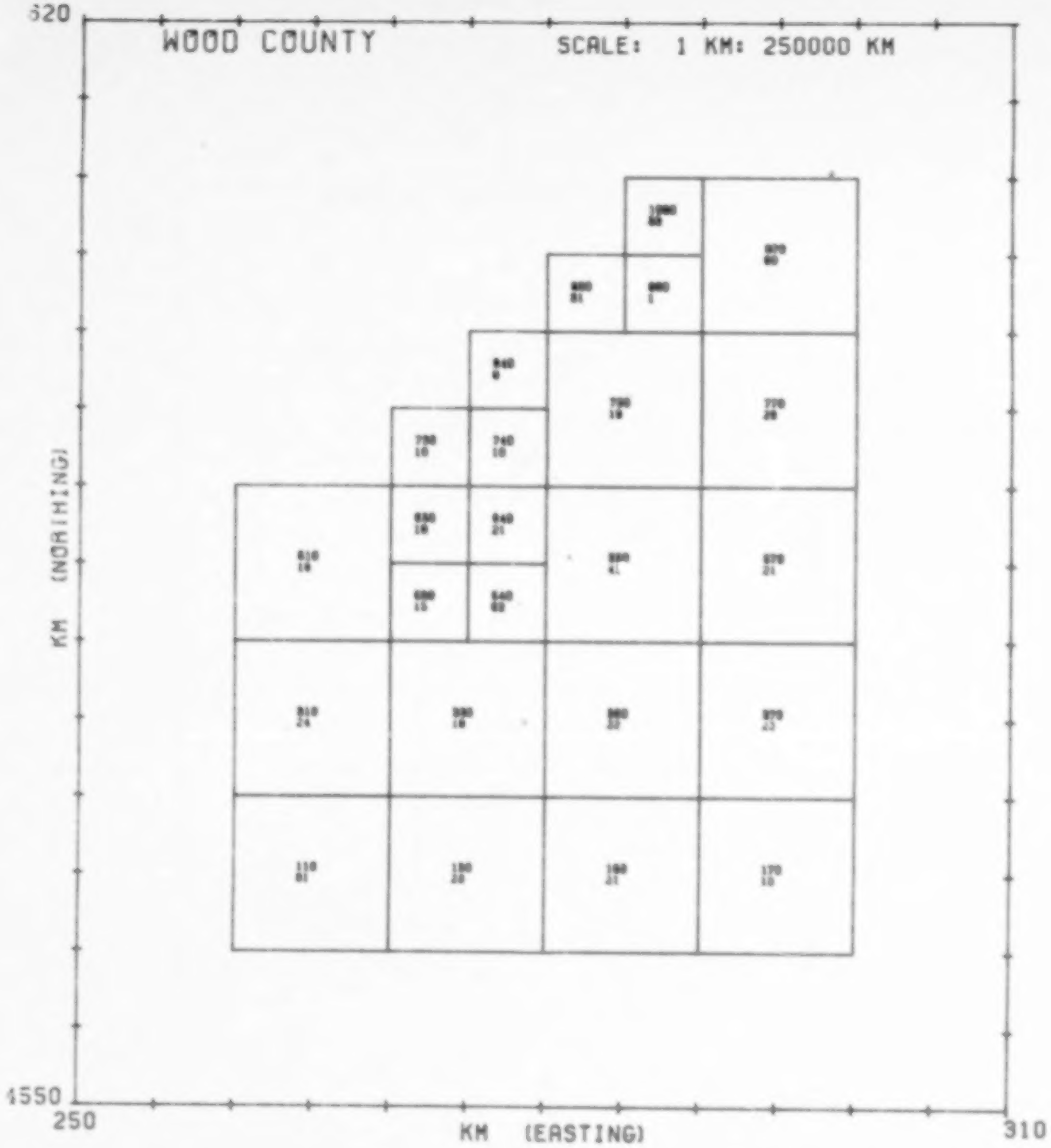

WOOD COUNTY
SCALE: 1 KM: 250000 KM
620
4550
250
310
KM (NORTHING)
KM (EASTING)

Figure 7v. CAASE 3 output for Wood County

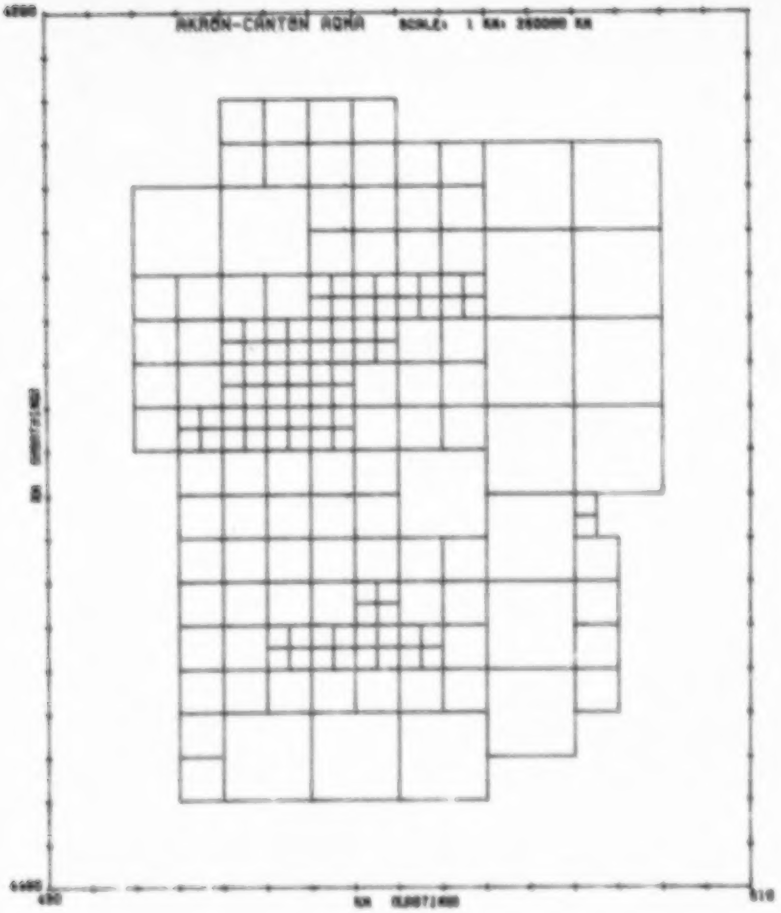

AKRON-CANTON AQMA
510

Figure 8a. Grid system for the Akron-Canton AQMA

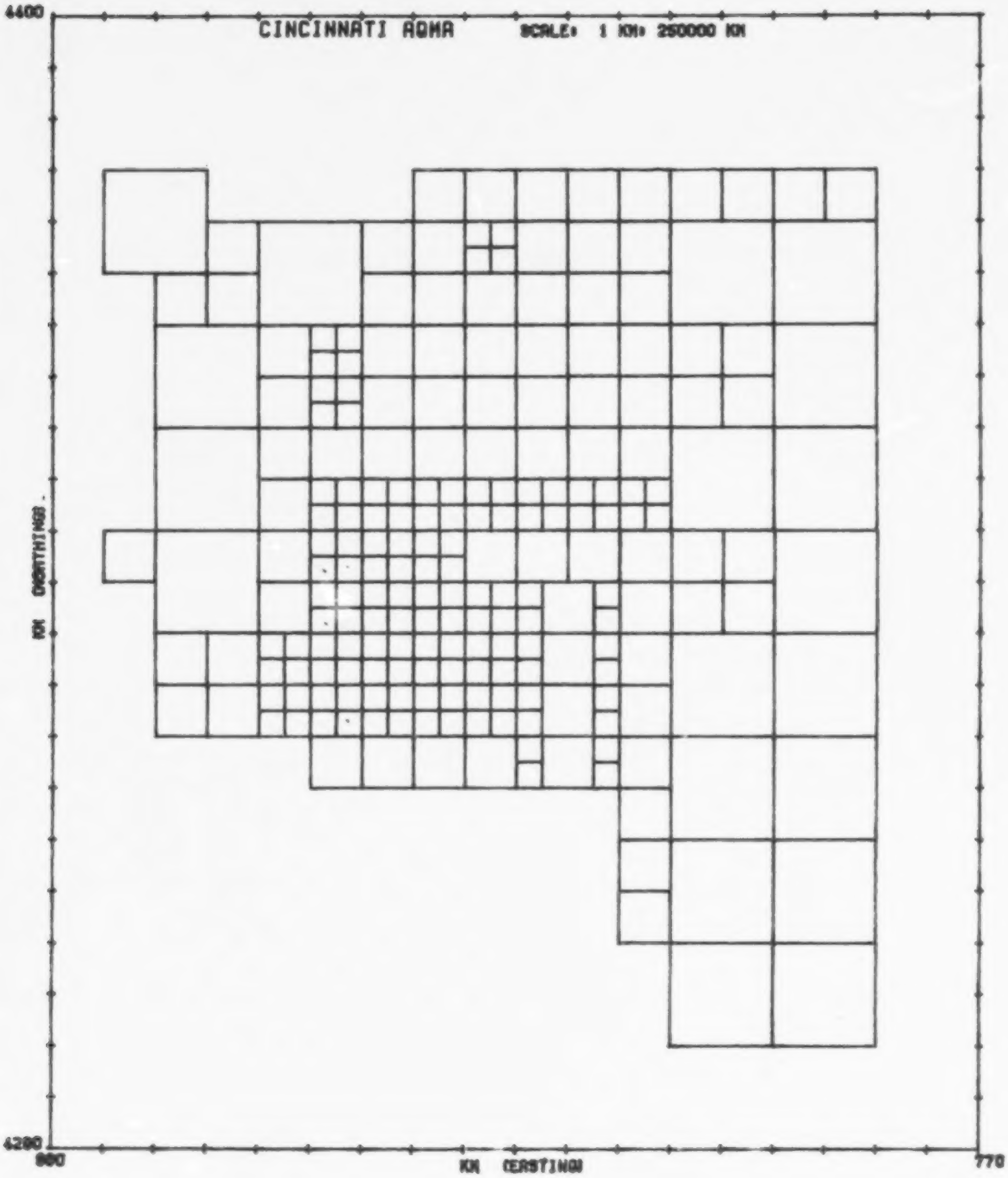

4400
CINCINNATI AQMA
SCALE: 1 KM= 250000 KM
KM (NORTHINGS)
4280
660
KM (EASTING)
770

Figure 8b. Grid system for the Cincinnati AQMA

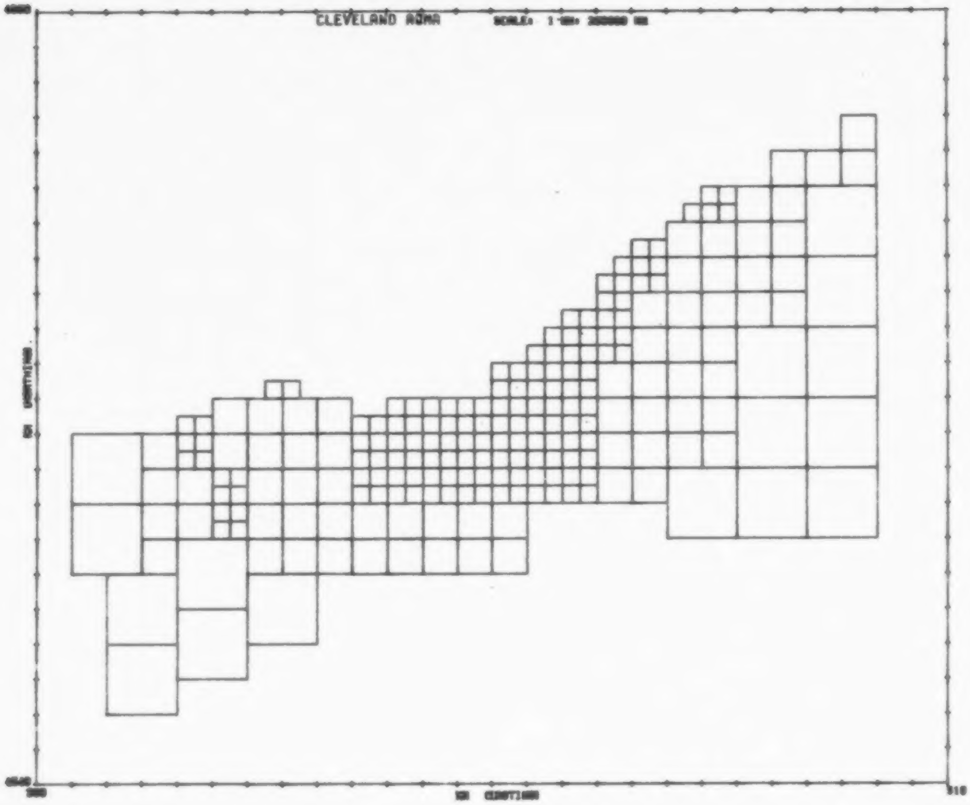

CLEVELAND AQMA
510

Figure 8c. Grid system for the Cleveland AQMA

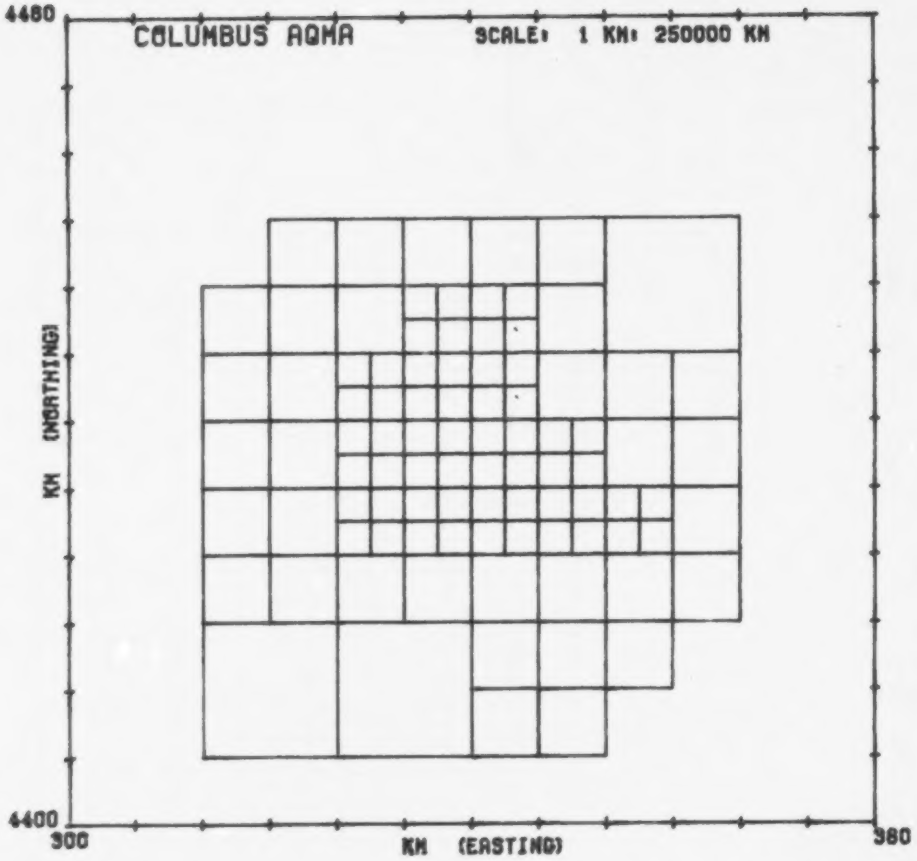

4480
COLUMBUS AQMA
SCALE: 1 KM: 250000 KM
KM (NORTHING)
4400
300
KM (EASTING)
380

Figure 8d. Grid system for the Columbus AQMA

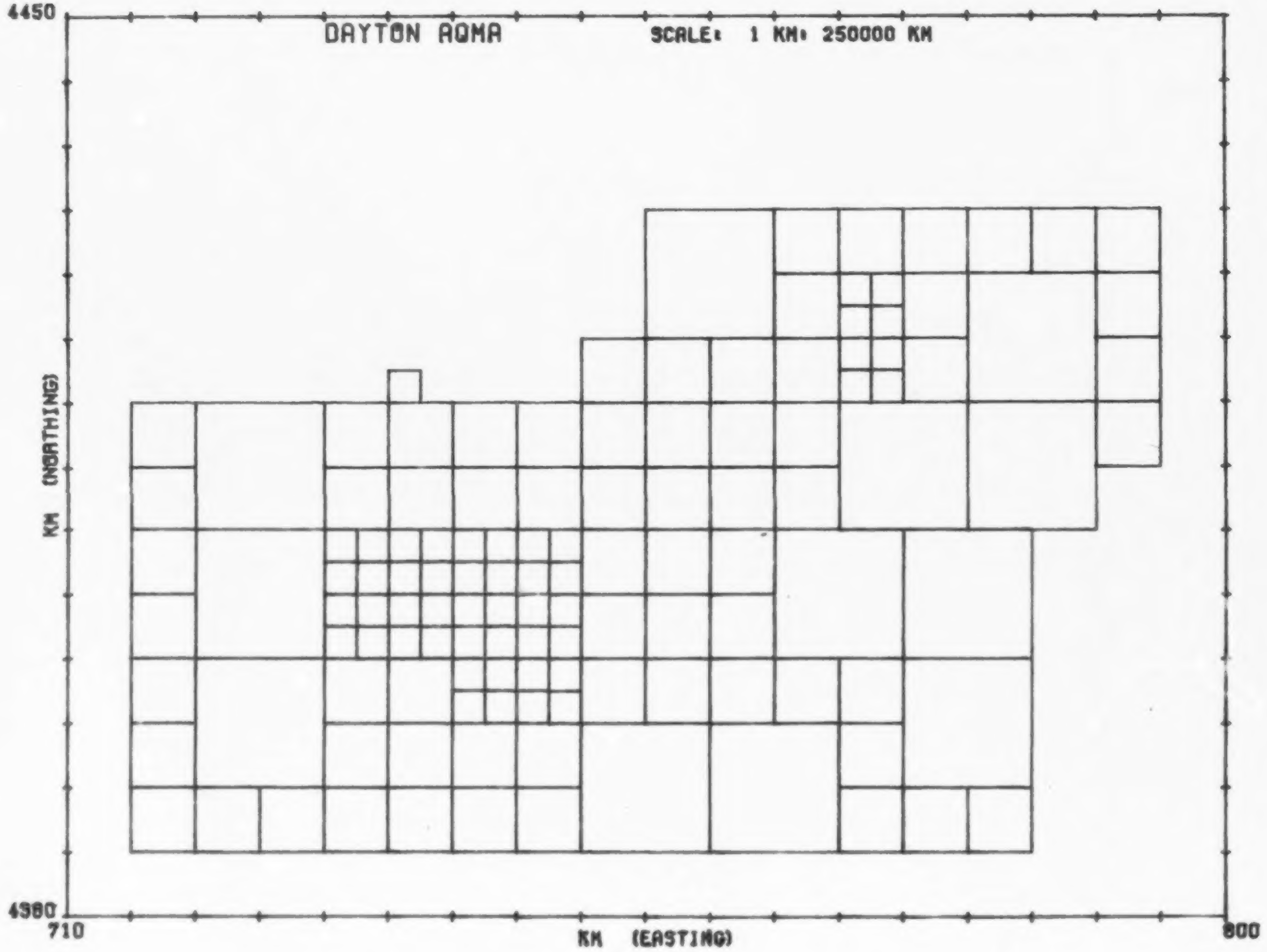

DAYTON AQMA
SCALE: 1 KM: 250000 KM
4450
4380
710
800
KM (NORTHING)
KM (EASTING)

Figure 8e. Grid system for the Dayton AQMA

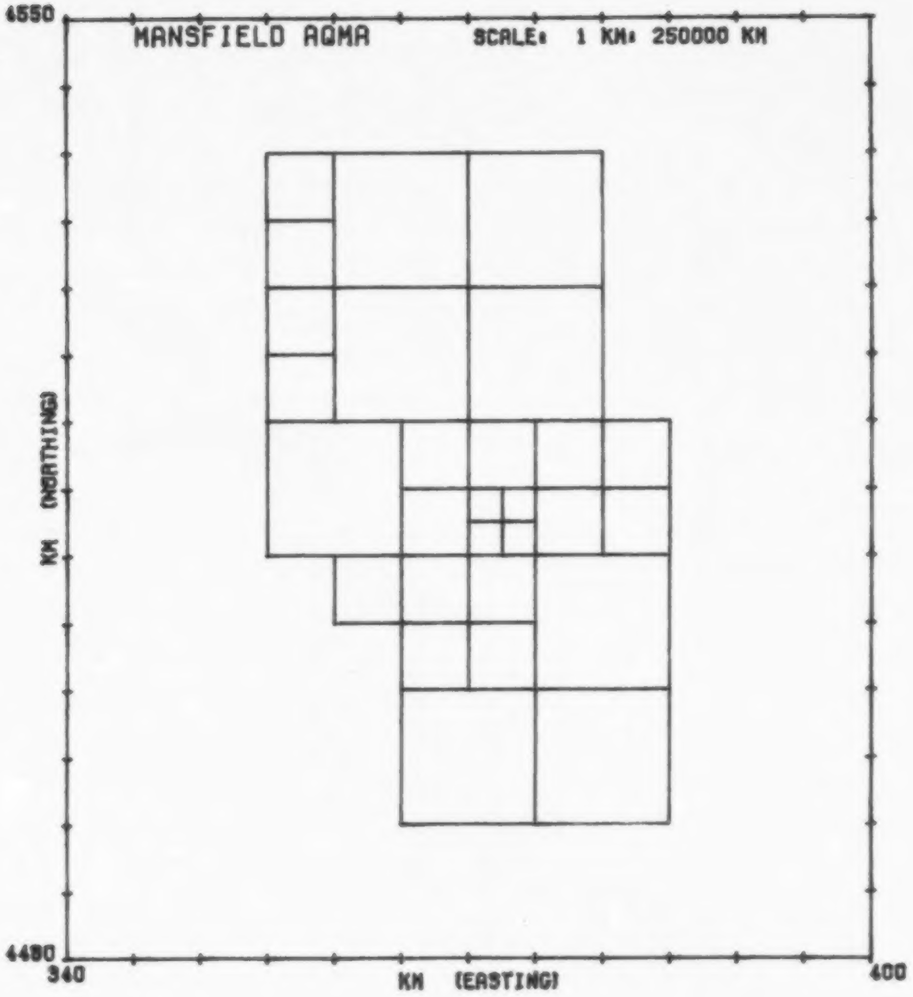

4550
MANSFIELD AQMA
SCALE: 1 KM: 250000 KM
KM (NORTHING)
4480
340
KM (EASTING)
400

Figure 8f. Grid system for the Mansfield AQMA

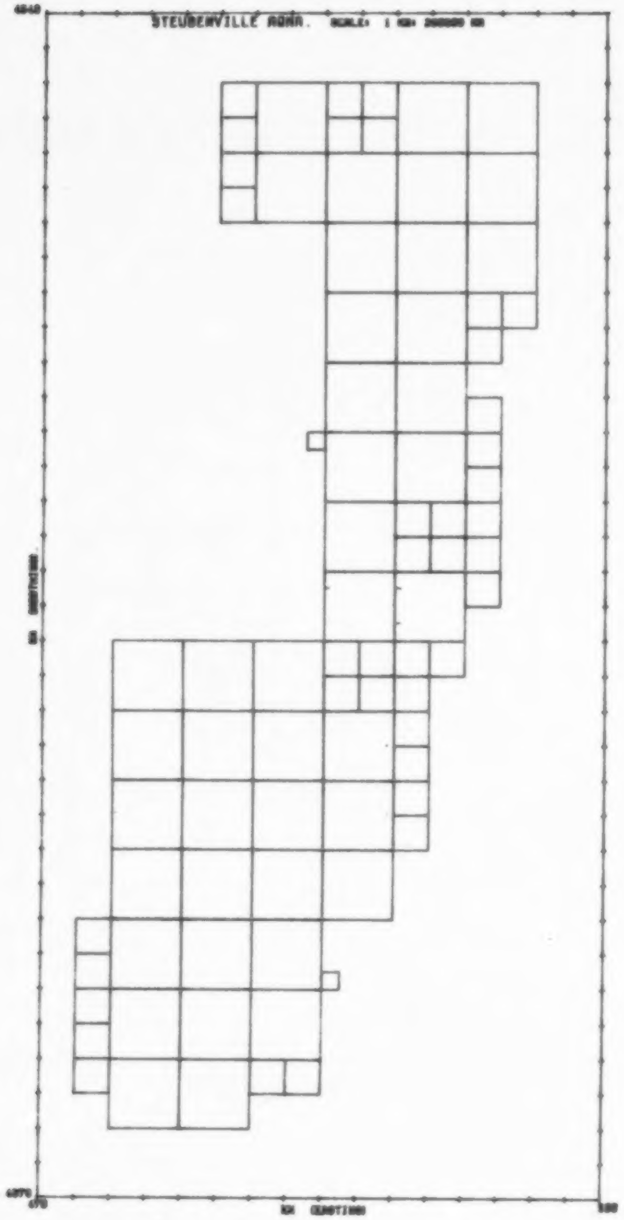

STEUBENVILLE AQMA.
KM EASTING

Figure 8g. Grid system for the Steubenville AQMA

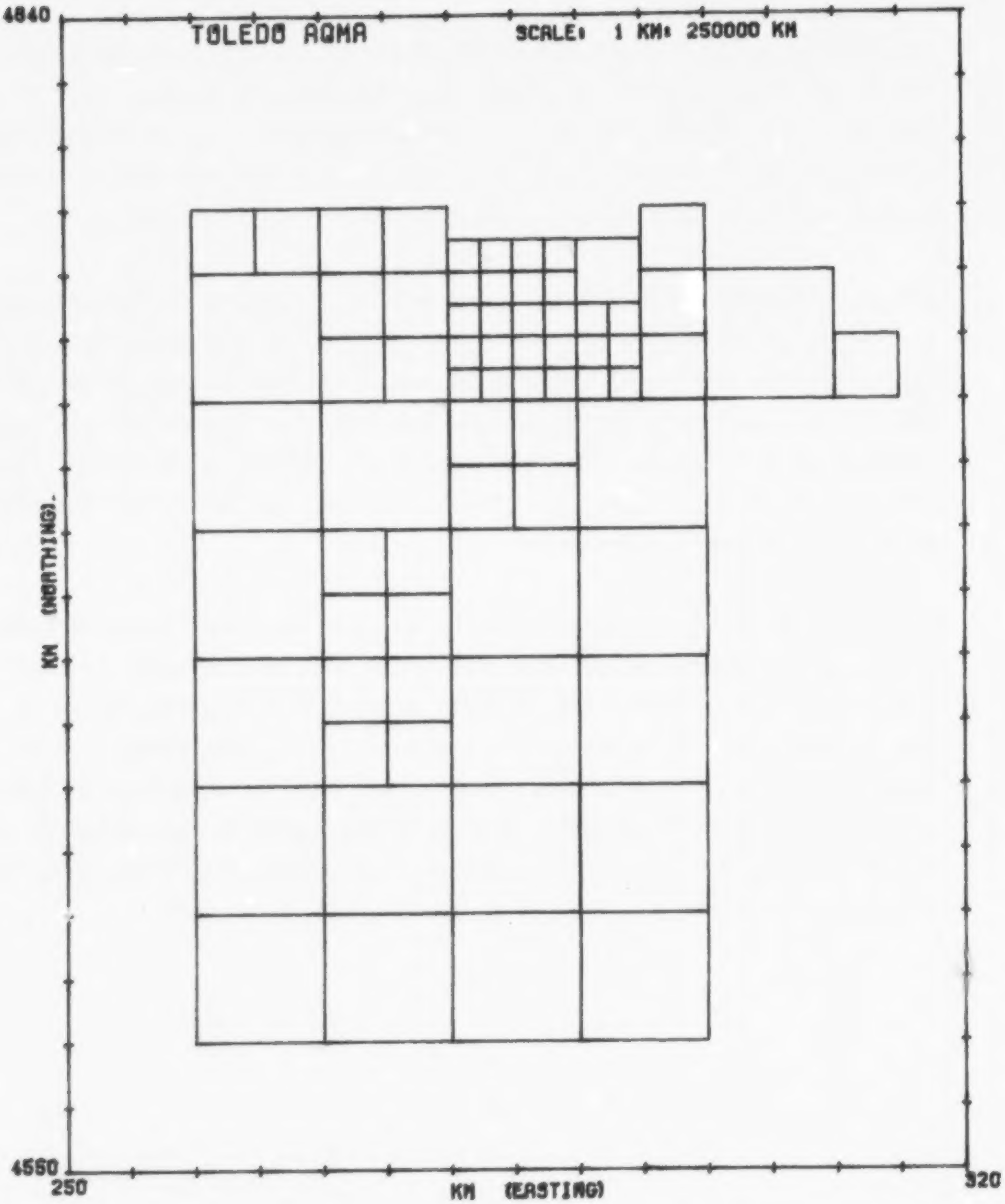

4840
TOLEDO AQMA
SCALE: 1 KM: 250000 KM
KM (NORTHING).
4550
250
KM (EASTING)
320

Figure 8h. Grid system for the Toledo AQMA

the composite grids for each AQMA are plotted. Table 5 breaks out the TSP area emission inventory calculated by CAASE 5 for each source category. Figures 9a to 9h depict the area emission density for particulates. CAASE 4 has been modified to allocate railroad emissions by the amount of track in each grid, and to allocate aircraft emissions by the number of operations in the grid containing the airport.

One problem which arose in the allocation of emissions to grid squares, was the allocation of some area sources by inverse population density. Limited Access and Rural Road are allocated by inverse population density, and in six counties (Cuyahoga, Franklin, Hamilton, Lucas, Montgomery, Summit), this procedure allocated nearly all emissions from these two vehicle sources to a grid. For these counties, the excessive emissions were redistributed uniformly over the county.

The methodology utilized to allocate fugitive emissions is proportional to the grid side cubed for dirt road emissions, proportional to the inverse population density for dirt air strips, and proportional to the grid square area for construction and land tilling emissions. In the original version of CAASE, dirt road emissions were allocated by inverse population density, but due to the excessive emissions allocated to grid squares with a few inhabitants, the side cubed allocation was developed by GCA as an approximation to the inverse population density.

Table 5. PARTICULATE AREA SOURCE EMISSIONS IN TONS/YR FOR 1974

Area source categories	Belmont	Butler	Clark	Clermont	Columbiana	Cuyahoga	Franklin	Geauga	Greene	Hamilton	Jefferson
Residential coal	337	115	45	73	317	208	140	68	22	319	273
Residential distillate oil	6	26	9	26	9	16	19	20	13	28	9
Residential natural gas	12	32	30	4	18	391	176	3	18	162	13
Commercial institutional coal	0	0	0	0	0	0	0	0	0	0	0
Commercial institutional distillate oil	1	6	3	0	2	38	15	1	1	25	2
Commercial institutional residual oil	1	4	3	0	2	35	13	1	1	18	2
Commercial institutional natural gas	3	20	12	2	8	177	55	4	3	99	7
Industrial coal	0	0	0	0	0	0	0	0	0	0	0
Industrial distillate oil	0	0	0	0	0	0	0	0	0	0	0
Industrial residual oil	0	0	0	0	0	0	0	0	0	0	0
Industrial natural gas	0	22	26	8	13	420	249	5	14	250	12
Incineration	0	0	0	0	0	0	0	0	0	0	0
Open burning	0	0	0	0	0	0	0	0	0	0	0
Off highway fuel usage	19	54	36	23	26	376	197	16	29	209	22
Aircraft operations	2	22	80	4	8	56	170	4	8	45	3
Vessel operations	0	0	0	0	0	64	0	0	0	5	0
Motor vehicle emissions	326	1,068	678	510	470	4,614	3,029	292	539	2,995	404
Railroads & miscellaneous	32	34	32	11	26	35	51	25	7	46	30
TOTAL[a]	749	1,402	954	662	899	6,430	4,113	438	655	4,203	776

[a] Totals vary due to round-off.

Table 5 (continued). PARTICULATE AREA SOURCE EMISSIONS IN TONS/YR FOR 1974

Area source categories	Lake	Lorain	Lucas	Monroe	Montgomery	Portage	Richland	Stark	Summit	Warren	Wood
Residential coal	25	62	86	25	79	135	81	296	108	50	40
Residential distillate oil	18	7	26	2	17	16	10	20	20	15	9
Residential natural gas	35	54	112	3	121	17	25	76	121	7	19
Commercial institutional coal	0	0	0	0	0	0	0	0	0	0	0
Commercial institutional distillate oil	4	7	12	0	19	2	4	11	15	1	2
Commercial institutional residual oil	3	6	0	0	17	2	4	9	13	0	2
Commercial institutional natural gas	15	26	43	0	67	6	0	40	55	2	9
Industrial coal	0	0	0	0	0	0	0	0	0	0	0
Industrial distillate oil	0	0	0	0	0	0	0	0	0	0	0
Industrial residual oil	0	0	0	0	0	0	0	0	0	0	0
Industrial natural gas	25	37	106	0	126	12	26	57	111	4	3
Incineration	0	0	0	0	0	0	0	0	0	0	0
Open burning	0	0	0	0	0	0	0	0	0	0	0
Off highway fuel usage	46	60	111	3	137	30	30	87	127	20	23
Aircraft operations	30	42	54	1	72	2	37	77	144	7	15
Vessel operations	30	0	35	0	0	0	0	0	0	0	0
Motor vehicle emissions	1,128	1,101	1,505	58	1,911	606	612	1,250	1,960	571	418
Railroads & miscellaneous	20	40	42	7	35	36	33	48	44	13	38
TOTAL[a]	1,381	1,444	2,132	99	2,602	861	860	1,972	2,718	689	577

[a] Totals vary due to round-off.

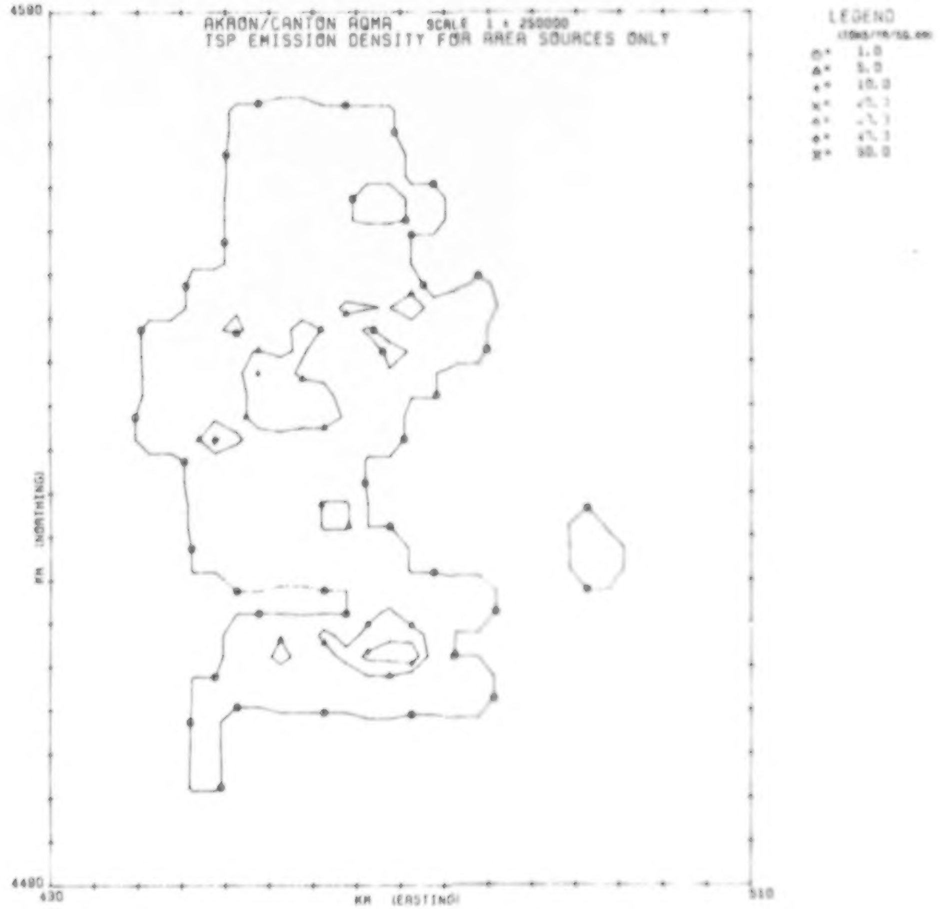

AKRON/CANTON AQMA SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
4580
4480
430
510
KM (NORTHING)
KM (EASTING)
LEGEND
(TONS/YR/SQ.KM)
1.0
5.0
10.0
50.0

Figure 9a. Particulate emission density for the Akron-Canton AQMA

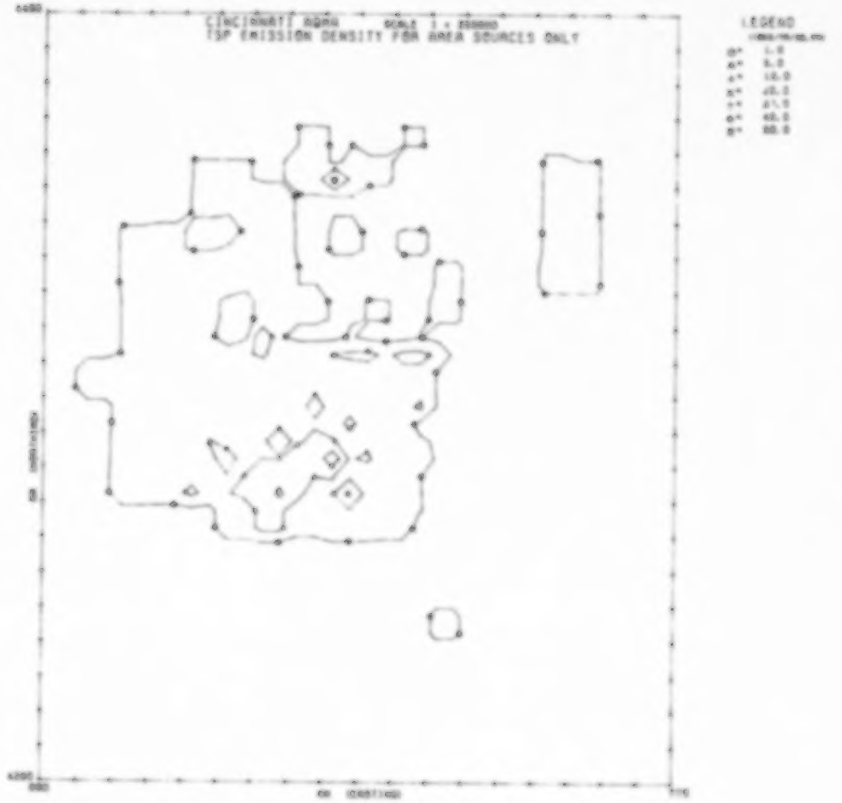

CINCINNATI AQMA
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
1.0
5.0
10.0

Figure 9b. Particulate emission density for the Cincinnati AQMA

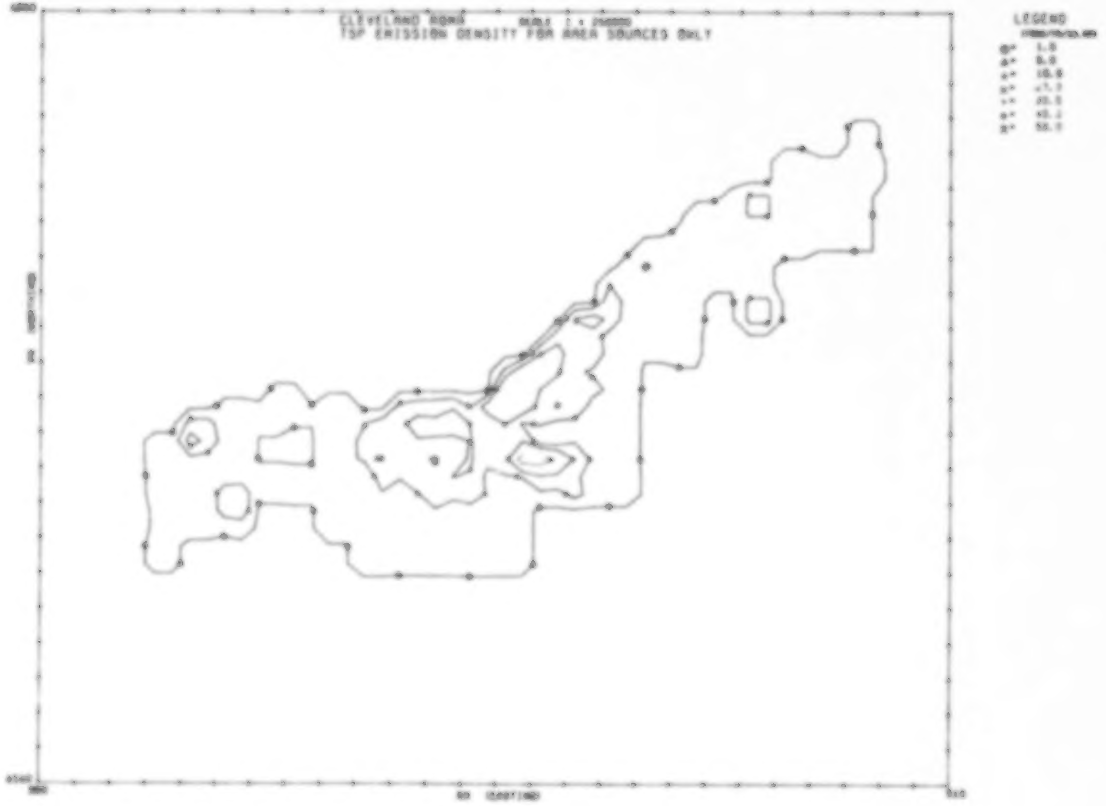

CLEVELAND AQMA
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
1.0
5.0
10.0

Figure 9c. Particulate emission density for the Cleveland AQMA

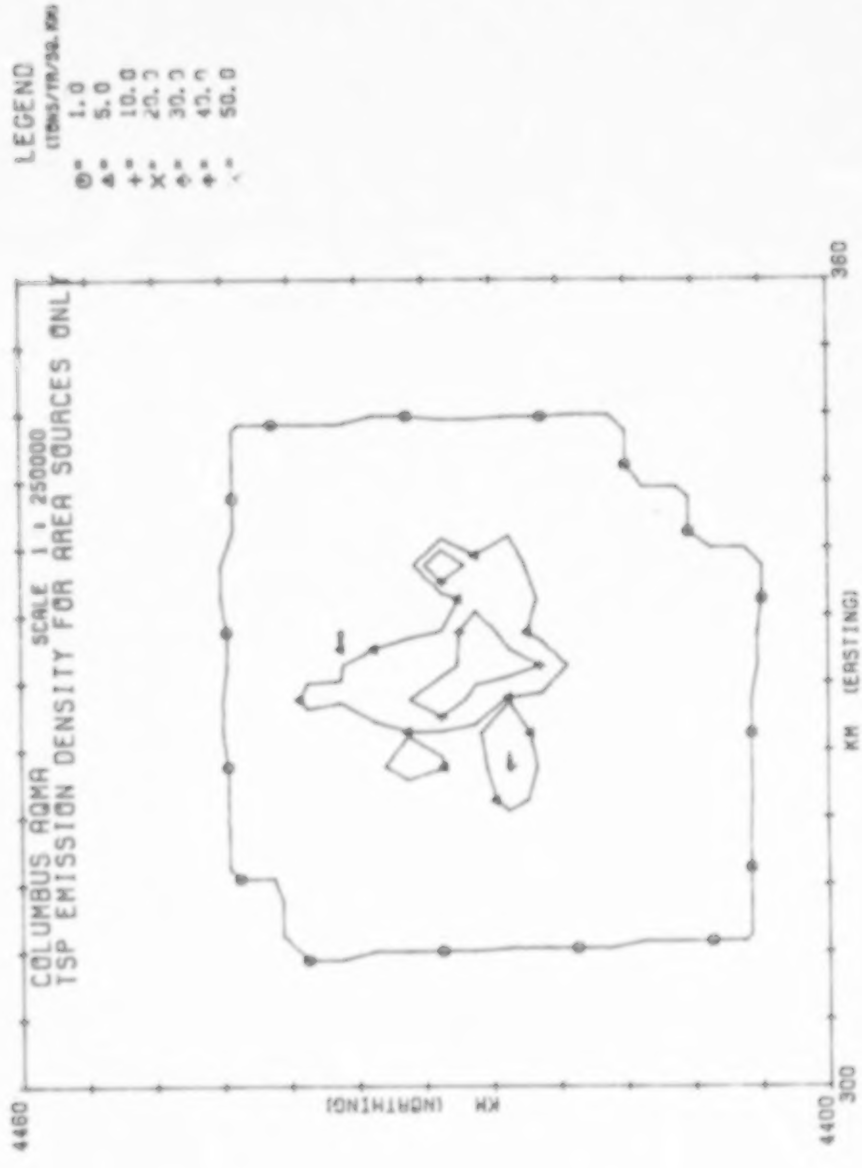

COLUMBUS AQMA SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
4460
4400
300
360
KM (NORTHING)
KM (EASTING)
LEGEND
(TONS/YR/SQ.KM)
1.0
5.0
10.0
20.0
30.0
40.0
50.0

Figure 9d. Particulate emission density for the Columbus AQMA

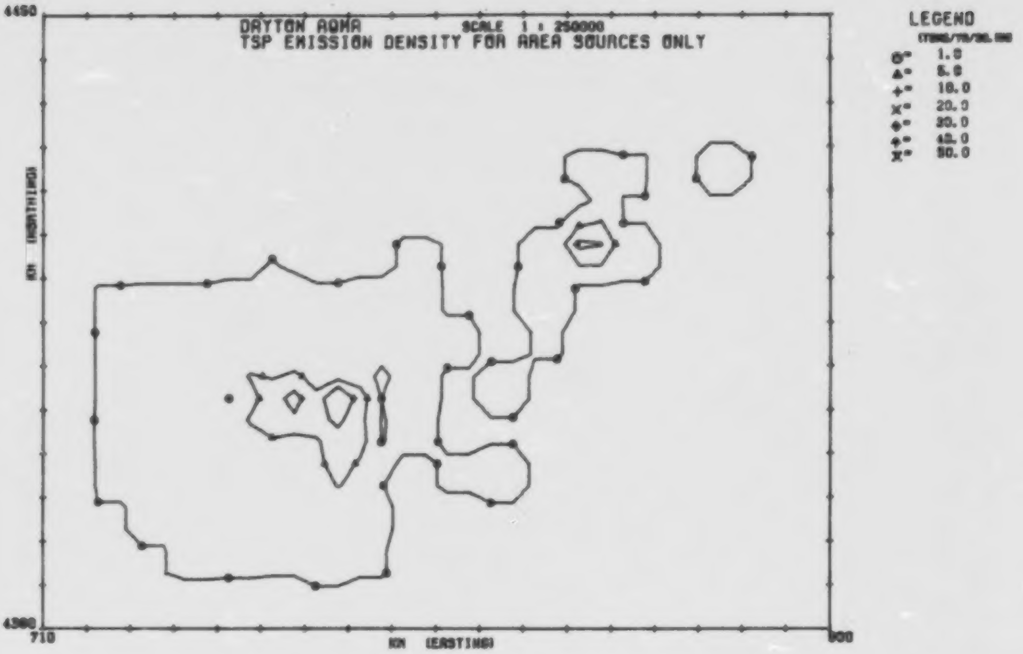

DAYTON AQMA
SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
4450
4380
710
800
KM (NORTHING)
KM (EASTING)
LEGEND
○= 1.0
△= 5.0
+= 10.0
×= 20.0
◇= 30.0
↑= 40.0
⌘= 50.0

Figure 9e. Particulate emission density for the Dayton AQMA

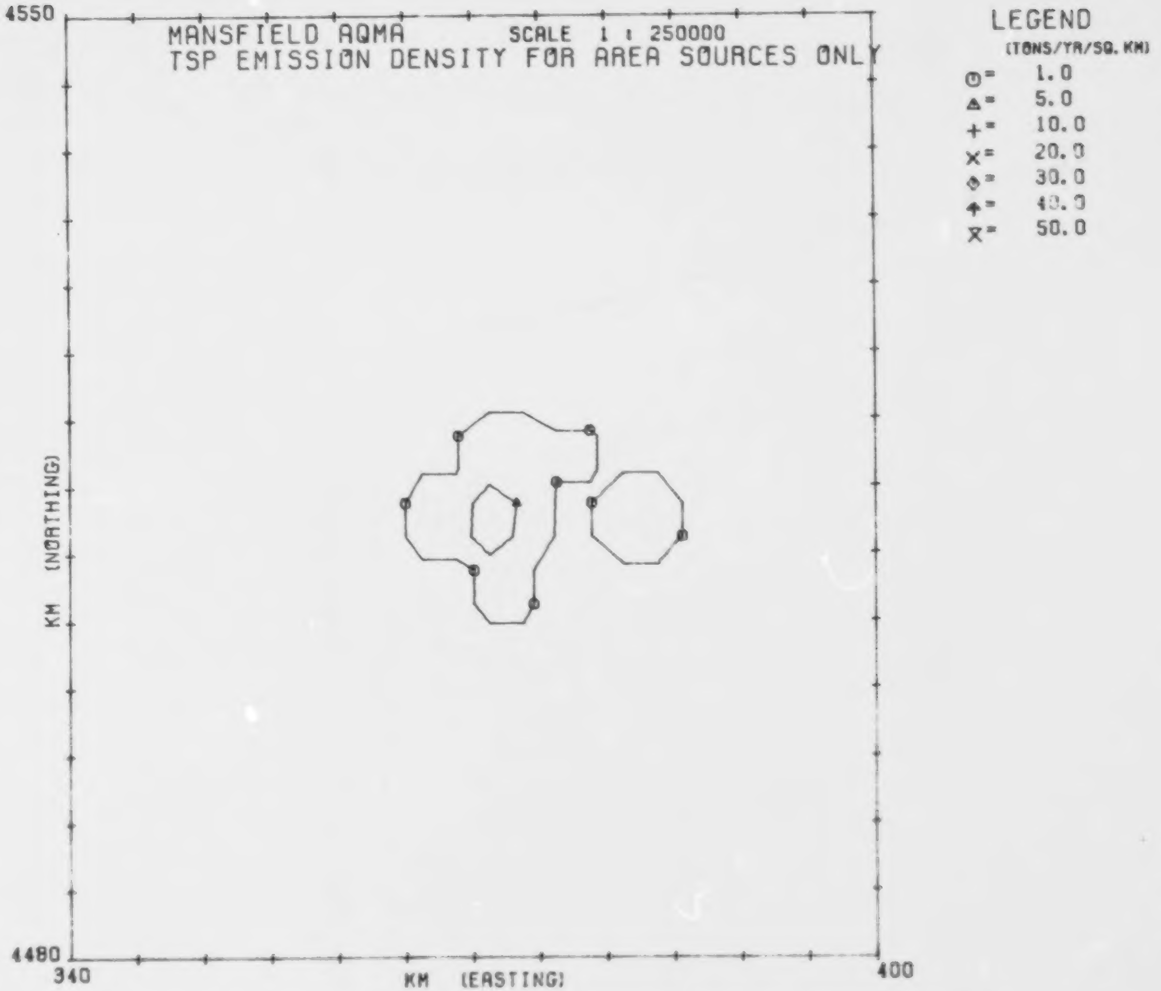

MANSFIELD AQMA
SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
4550
4480
340
400
KM (NORTHING)
KM (EASTING)
LEGEND
(TONS/YR/SQ. KM)
⊙= 1.0
△= 5.0
+= 10.0
×= 20.0
◇= 30.0
✢= 40.0
X̄= 50.0

Figure 9f. Particulate emission density for the Mansfield AQMA

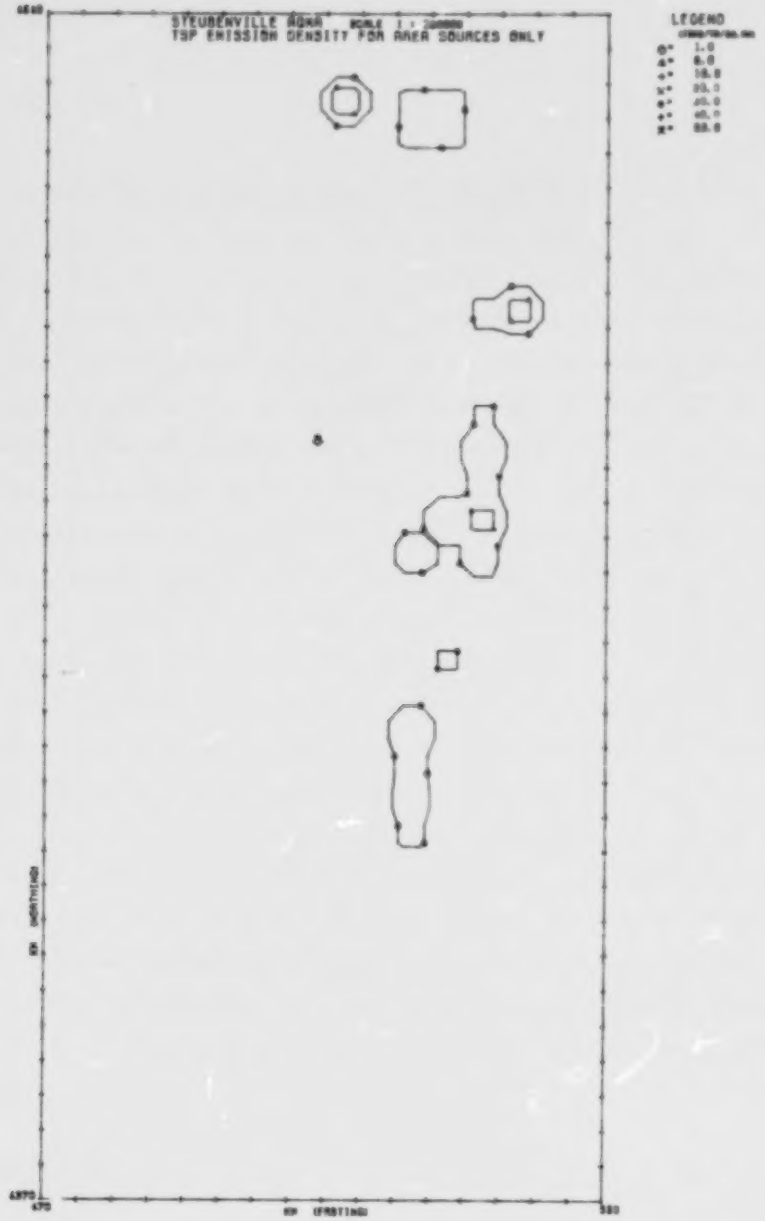

STEUBENVILLE AQMA
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
1.0
10.0
KM (EASTING)
KM (NORTHING)

Figure 9g. Particulate emission density for the Steubenville AQMA

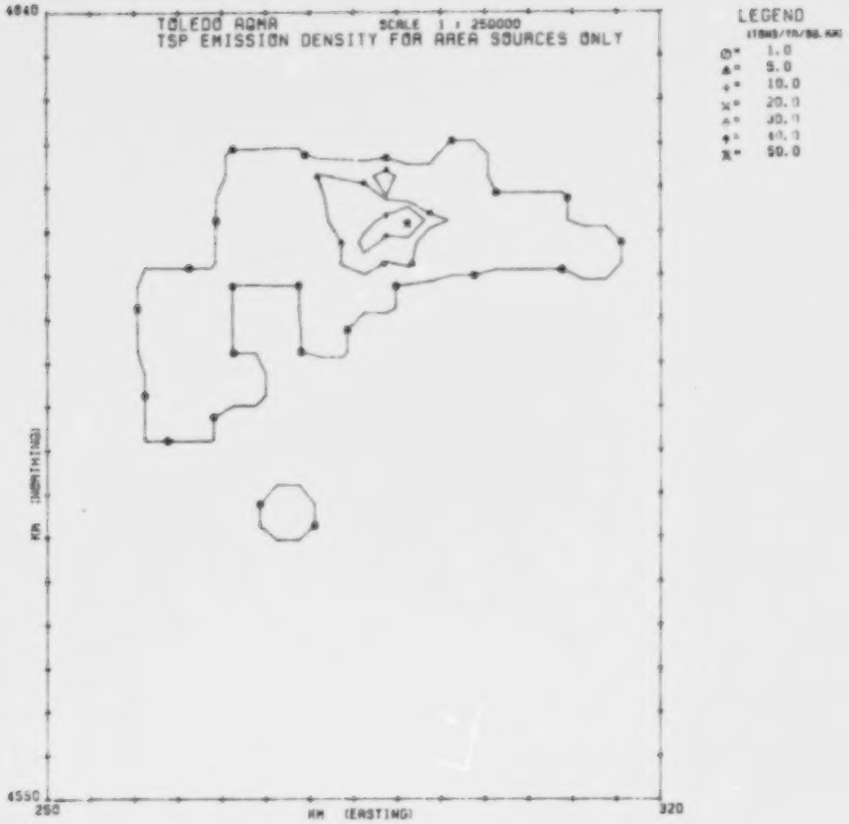

TOLEDO AQMA
SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
(TONS/YR/SQ.KM)
= 1.0
= 5.0
= 10.0
= 20.0
= 30.0
= 40.0
= 50.0
4640
4550
250
320
KM (NORTHING)
KM (EASTING)

Figure 9h. Particulate emission density for the Toledo AQMA

SECTION IV

MODEL CALIBRATION

INTRODUCTION

The main reason for running an air quality model, such as MCDM, is to obtain a representation of the air quality over a large region. This could be done alternatively by distributing a large number of monitors over the area, but the cost of installing and maintaining such a network is extremely expensive. In practice, a small number of monitors are sited in a region, and a model is run to calculate the air quality at the monitors. If the observed air quality is plotted against the calculated value, a line with intercept 0 and slope 1 should go through all points. In actuality, the model is not perfect, and a least squares linear regression line is put through the data points. This equation is the calibration curve, and represents the best approximation to the data. The slope of the calibration curve should be approximately one, and the intercept near a representative value of the background level. If the calibration curve is applied to the calculated air quality values, an accurate representation of the air quality over the region can be obtained.

Under this contract, the principal reason for running and calibrating MCDM was to determine the regions of high TSP air quality so that the area source contribution could be determined for the problem area with a finer receptor grid. The principal task under this contract was the development of the area emission inventory, and the determination of the area source contribution to the TSP air quality. Although the model was calibrated and run with a 5 km grid, the calibration and modeling results should be used with caution since an indepth analysis of the monitors used for calibration was not performed, and all point source data have not been verified by OEPA.

TSP MODEL CALIBRATION

As requested by the project officer, only six AQMAs were calibrated under this contract. The Cincinnati and Steubenville AQMAs were not calibrated since both AQMAs are in regions of rough valley terrain, and MCDM does not accurately calculate the air quality under these conditions. Except for the Cleveland AQMA, the calibration curves for the AQMAs were not very good. Table 6 lists the correlation coefficient, and the calibration parameters for the AQMAs which were calibrated. In Figures 10 through 15, the calibration data is plotted, and in Table 7 through 12, the air quality data and calculated data for each AQMA is tabulated along with statistical parameters derived from the calibration curve.

In Figure 13, there is a monitor with an observed value of 83 μg and a calculated value of 79.8 μg. Since this data point calculated considerably higher than the other monitors, the calibration was attempted with the point removed, but no appreciable improvement in the correlation resulted, thus the monitor was used for calibration. For the Cleveland AQMA, the monitor at coordinates (404.88, 4590.98), calculated much higher than any other monitor, and it appears that this point was influenced by emission points with emission rates much higher than actually occurred. With this point removed, the correlation jumped from 0.627 to 0.909, thus this monitor was not utilized in calibrating the Cleveland AQMA.

CALIBRATION OF TSP USING AN INVENTORY WITH FUGITIVE DUST EMISSION

Due to the results obtained in the calibration of the AQMAs without fugitive dust sources, it was decided to calibrate some AQMAs with fugitive dust emissions included to determine whether the correlation would improve. In Figures 16 and 17 the calibration data for the

Table 6. CALIBRATION AND CORRELATION DATA

AQMA	Correlation Coefficient	Intercept	Slope
Akron/Canton	0.378	63.59	0.82
Columbus	0.598	69.21	0.89
Cleveland	0.909	58.68	0.67
Dayton	0.217	68.41	0.19
Mansfield	0.563	70.15	1.79
Toledo	0.408	63.30	0.41

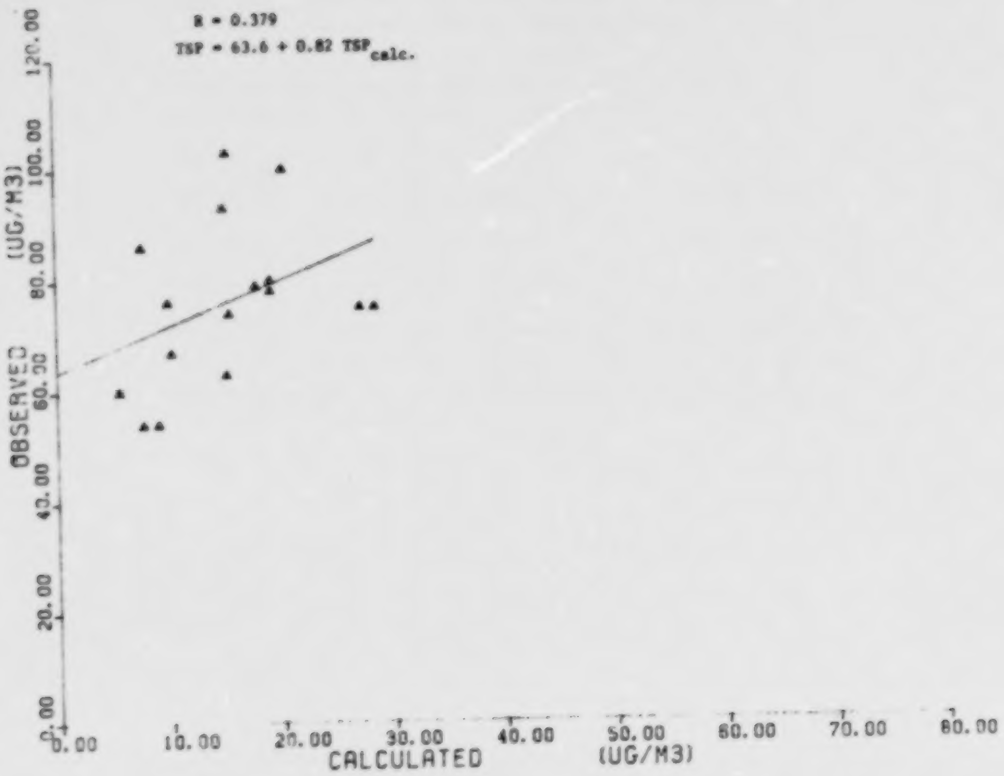


Figure 10. TSP calibration for the Akron/Canton AQMA

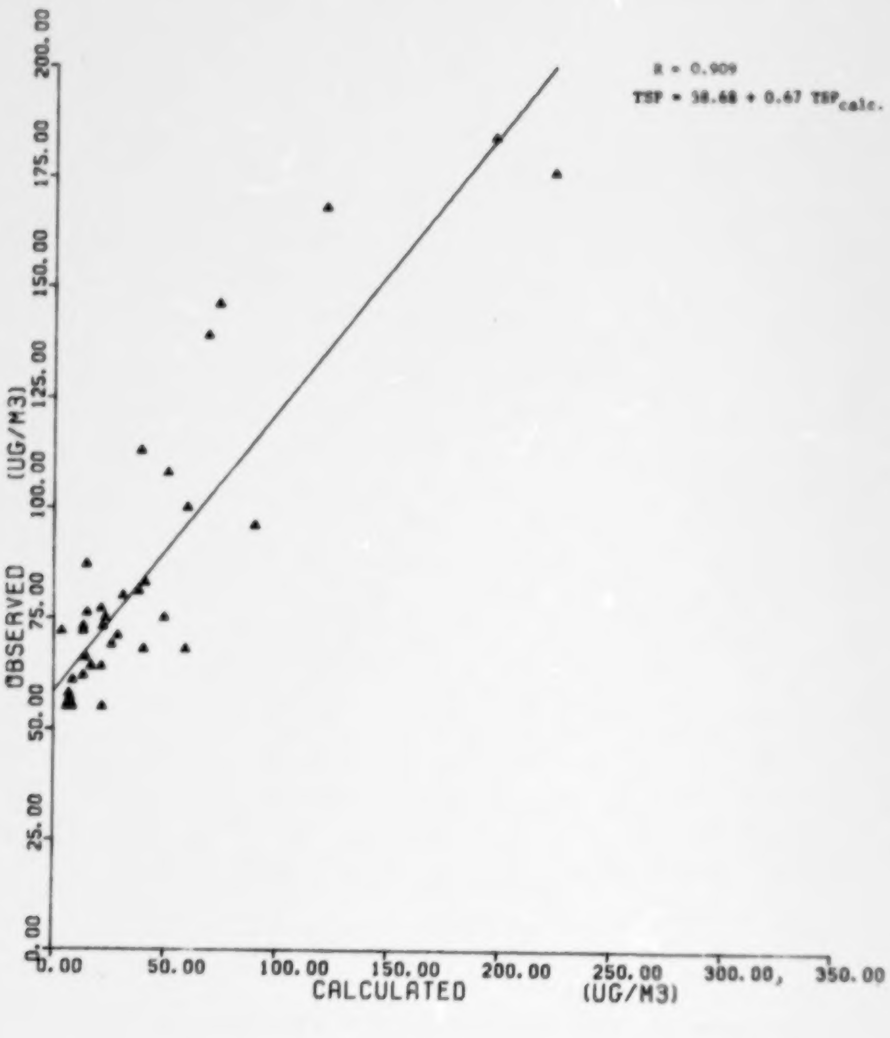


Figure 11. TSP calibration for the Cleveland AQMA

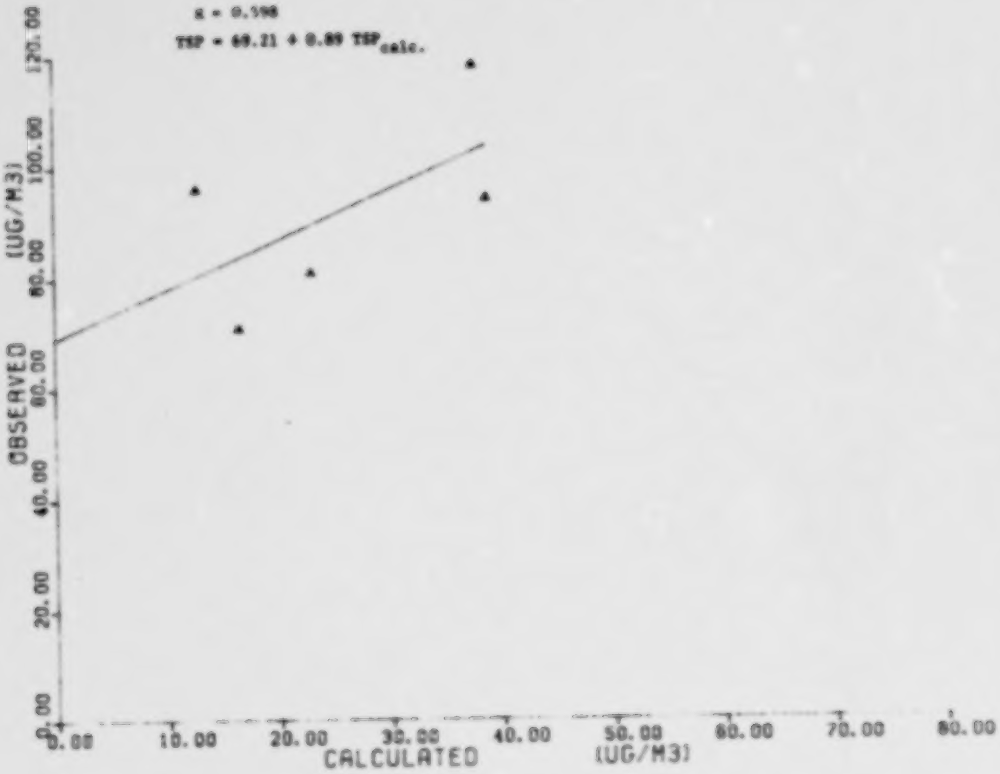


Figure 12. TSP calibration for the Columbus AQMA

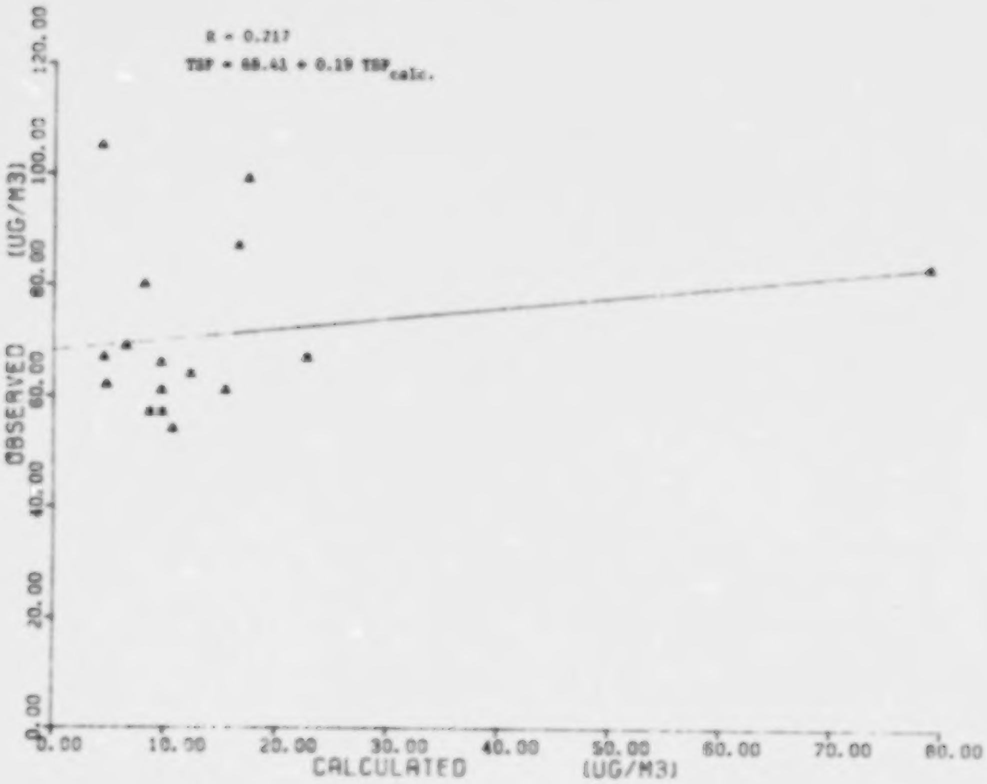


Figure 13. TSP calibration for the Dayton AQMA

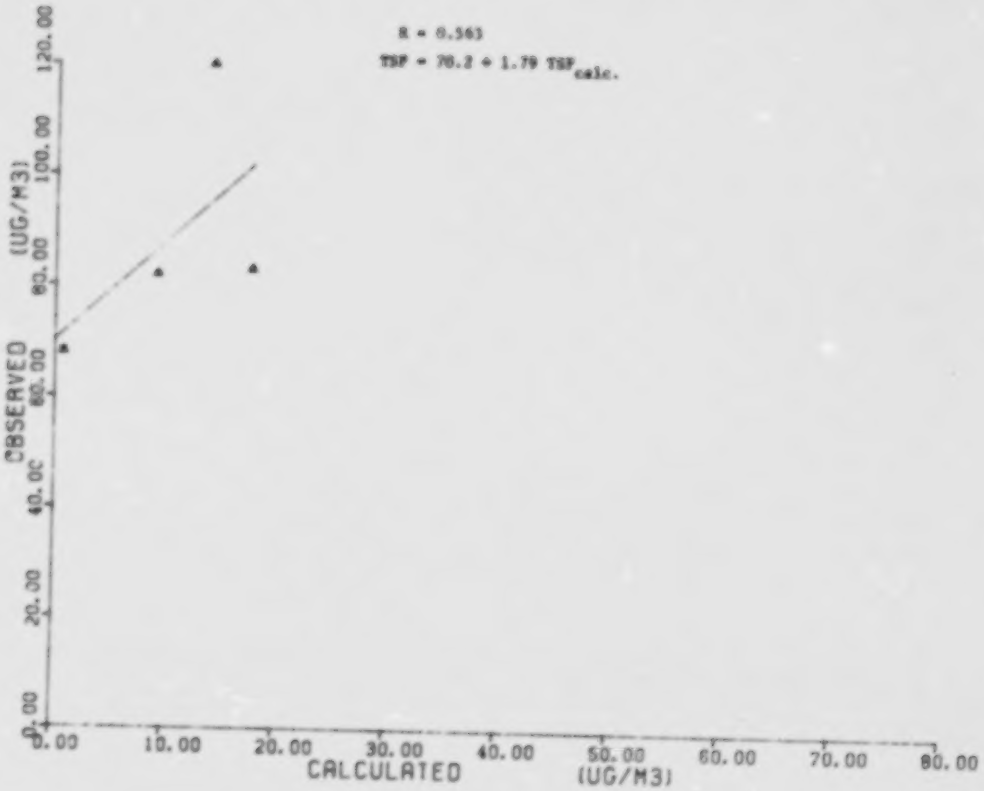


Figure 14. TSP calibration for the Mansfield AQMA

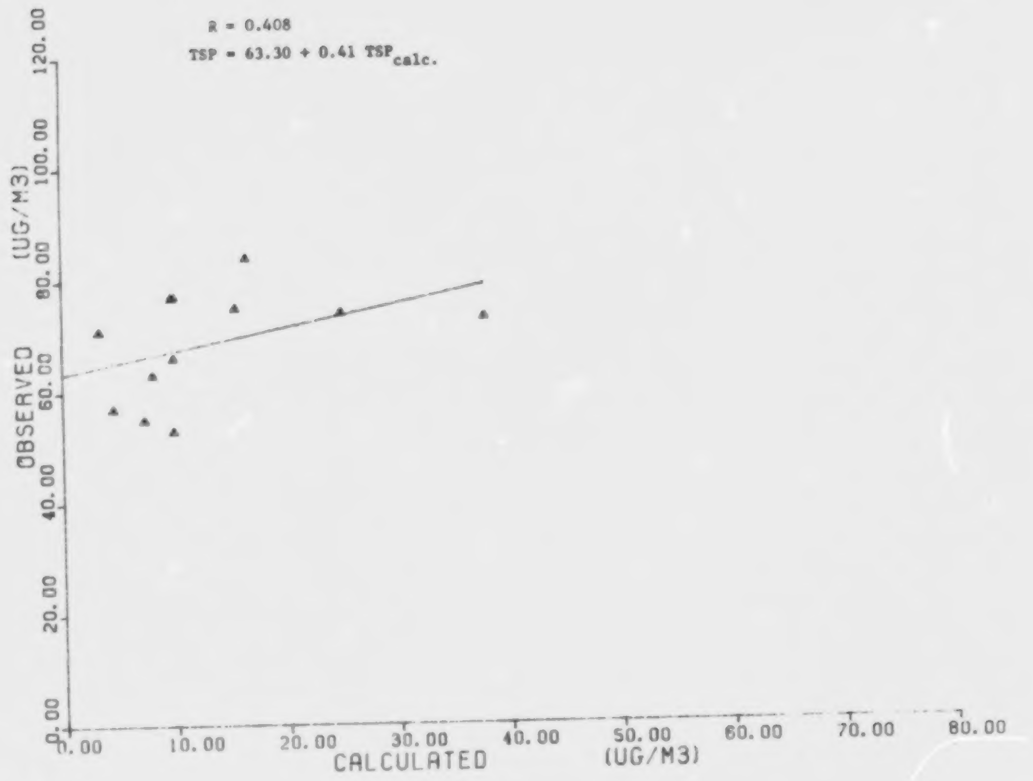


Figure 15. TSP calibration for the Toledo AQMA

Table 7. CALIBRATION DATA FOR THE AKRON/CANTON AQMA

RECEPTOR LOCATION		OBSERVED	CALC. PT.	CALC. AREA	TOTAL
453.10	4543.99	74.00	11.88	3.57	15.45
452.03	4551.71	67.00	7.55	2.73	10.28
458.38	4550.25	79.00	14.29	3.62	17.91
460.70	4545.76	100.00	16.46	3.95	20.41
456.56	4547.56	103.00	11.25	4.12	15.37
443.92	4540.59	80.00	15.83	3.34	19.17
453.07	4565.30	54.00	6.26	1.41	7.67
450.11	4532.94	75.00	8.52	1.49	10.01
463.06	4550.29	93.00	12.17	2.91	15.08
462.99	4573.43	85.00	6.21	1.47	7.68
456.20	4516.01	75.00	25.94	2.57	28.51
479.31	4533.32	75.00	25.98	1.19	27.17
470.07	4502.52	63.00	14.32	0.86	15.18
446.59	4507.49	57.00	4.93	0.63	5.56
445.61	4512.28	54.00	8.14	0.91	9.05
479.54	4555.96	73.00	17.18	2.03	19.21

XMEAN= 0.15232E+02 STANDARD DEVIATION= 0.67429E+01

YMEAN= 0.76063E+02 STANDARD DEVIATION= 0.14613E+02

CORR.COEFF.= 0.37777E+00 NO. OF POINTS= 16

SLOPE= 0.31865E+00 Y-INTERCEPT= 0.65593E+02

Table 8. CALIBRATION DATA FOR THE CLEVELAND AQMA

RECEPTOR LOCATION		OBSERVED	CALC. PT.	CALC. AREA	TOTAL
441.20	4592.20	113.00	32.50	5.85	38.35
442.60	4594.80	146.00	68.10	5.10	73.20
443.50	4593.65	176.00	217.52	6.20	223.72
444.80	4588.20	164.00	191.38	5.47	196.85
448.60	4596.60	108.00	42.38	8.28	50.66
437.30	4590.10	68.00	34.01	5.82	39.83
443.80	4592.40	202.00	171.14	5.72	176.86
445.60	4596.30	139.00	61.22	7.20	68.42
437.20	4592.00	71.00	22.31	5.96	28.27
439.68	4588.10	80.00	25.14	5.45	30.59
441.40	4588.70	83.00	34.58	6.00	40.58
445.10	4591.30	158.00	115.16	6.05	121.21
432.00	4589.00	59.00	20.83	4.81	25.64
446.40	4589.30	96.00	83.72	6.09	89.81
452.10	4600.10	81.00	30.19	7.54	37.73
447.90	4594.70	100.00	51.76	7.79	59.55
458.35	4583.72	87.00	11.21	3.20	14.41
450.43	4592.59	73.00	17.55	4.16	21.71
474.43	4581.60	55.00	4.90	0.76	5.66
494.02	4589.95	72.00	2.89	0.54	3.43
486.78	4604.14	58.00	5.59	1.08	6.67
421.02	4534.18	66.00	11.68	2.34	14.02
437.61	4581.46	77.00	16.58	4.31	20.89
406.41	4587.56	68.00	56.67	2.05	58.72
406.71	4587.71	75.00	47.17	2.03	49.20
463.45	4610.76	64.00	12.80	3.72	16.52
464.79	4613.37	76.00	11.57	3.09	14.66
496.24	4624.18	56.00	4.95	1.44	6.39
485.83	4614.73	61.00	6.61	1.62	8.23
485.83	4614.73	55.00	6.61	1.62	8.23
494.81	4629.73	57.00	5.70	1.52	7.22
468.71	4615.01	62.00	10.29	2.77	13.06
479.81	4618.68	73.00	10.83	2.14	12.97
479.81	4618.68	72.00	10.83	2.14	12.97
460.49	4605.87	75.00	17.71	5.16	22.87
460.59	4603.16	55.00	17.06	4.46	21.52
460.18	4608.65	64.00	16.46	4.52	20.98

XMEAN= 0.44508E+02
YMEAN= 0.88784E+02
CORR.COEFF.= 0.90935E+00
SLOPE= 0.67041E+00

STANDARD DEVIATION= 0.53439E+02
STANDARD DEVIATION= 0.39398E+02
NO. OF POINTS= 37
Y-INTERCEPT= 0.58677E+02

Table 9. CALIBRATION DATA FOR THE COLUMBUS AQMA

RECEPTOR LOCATION		OBSERVED	CALC. PT.	CALC. AREA	TOTAL
329.19	4425.75	94.00	33.30	5.46	38.76
325.71	4429.53	81.00	18.59	4.41	23.00
330.12	4435.91	96.00	8.61	4.13	12.74
329.37	4434.08	71.00	11.62	4.88	16.50
329.42	4425.93	118.00	32.03	5.61	37.64

XMEAN= 0.25728E+02 STANDARD DEVIATION= 0.11969E+02
YMEAN= 0.92000E+02 STANDARD DEVIATION= 0.17734E+02
CORR.COEFF.= 0.59735E+00 NO. OF POINTS= 5
SLOPE= 0.33537E+00 Y-INTERCEPT= 0.69203E+02

Table 10. CALIBRATION DATA FOR THE DAYTON AQMA

RECEPTOR LOCATION		OBSERVED	CALC. PT.	CALC. AREA	TOTAL
775.34	4423.13	57.00	7.78	1.95	9.73
775.42	4425.47	54.00	9.10	1.46	10.56
772.54	4424.51	41.00	11.97	3.42	15.39
754.55	4403.75	57.00	21.39	1.33	22.72
766.39	4410.05	57.00	7.46	1.17	8.63
763.39	4393.79	59.00	4.67	1.80	6.47
754.20	4411.15	33.00	77.17	1.73	78.90 ✓
743.30	4337.90	52.00	3.07	1.65	4.73
730.70	4393.05	67.00	2.96	1.51	4.47
740.15	4410.65	54.00	9.52	2.73	12.25
736.30	4402.15	55.00	6.52	3.07	9.59
741.95	4405.95	79.00	13.12	4.29	17.41
740.55	4405.10	37.00	12.25	4.27	16.52
733.33	4392.31	135.00	2.58	1.57	4.25
733.80	4399.50	30.00	5.16	2.93	8.09
742.10	4400.70	51.00	6.41	3.25	9.66

```
XMEAN= 0.1494[illegible]          STANDARD DEVIATION= 0.17306E+02
YMEAN= 0.711[illegible]E+02       STANDARD DEVIATION= 0.15259E+02
CORR.COEFF.= 0.[illegible]        NO. OF POINTS=   15
SLOPE= 0.1[illegible]             Y-INTERCEPT= 0.58405E+02
```

Table 11. CALIBRATION DATA FOR THE MANSFIELD AQMA

RECEPTOR LOCATION		OBSERVED	CALC. PT.	CALC. AREA	TOTAL
373.37	4513.62	1[illegible]	12.30	1.69	13.99
372.40	4516.95	[illegible]	7.80	1.35	9.15
372.13	4513.92	33.[illegible]	15.35	2.20	17.55
360.25	4526.54	[illegible]	0.45	0.32	0.77

XMEAN= 0.10390E+02
STANDARD DEVIATION= 0.72972E+01

YMEAN= 0.38750E+02
STANDARD DEVIATION= 0.23002E+02

CORR.COEFF.= 0.55299E+00
NO. OF POINTS= 4

SLOPE= 0.17499E+01
Y-INTERCEPT= 0.20152E+02

Table 12. CALIBRATION DATA FOR THE TOLEDO AQMA

RECEPTOR LOCATION		OBSERVED	CALC. PT.	CALC. AREA	TOTAL
280.61	4603.63	77.00	3.55	1.23	9.33
285.50	4609.20	53.00	7.50	2.07	9.57
256.10	4599.90	71.00	2.30	1.03	3.33
278.75	4604.48	74.00	23.77	1.25	25.02
298.50	4613.70	55.00	5.45	1.82	7.27
275.02	4621.55	57.00	3.16	1.36	4.52
290.40	4612.25	73.00	34.45	3.44	37.89
287.10	4511.75	75.00	11.73	3.83	15.56
283.00	4613.00	77.00	7.02	3.05	10.03
283.20	4620.30	53.00	4.87	3.20	8.07
293.70	4621.10	66.00	7.44	2.53	9.97
293.80	4617.20	54.00	12.55	4.02	16.57

```
XMEAN= 0.13157E+02                STANDARD DEVIATION= 0.97372E+01
YMEAN= 0.68750E+02                STANDARD DEVIATION= 0.98323E+01
CORR.COEFF.= 0.40758E+00          NO. OF POINTS=   12
SLOPE= 0.41555E+00                Y-INTERCEPT= 0.63304E+02
```

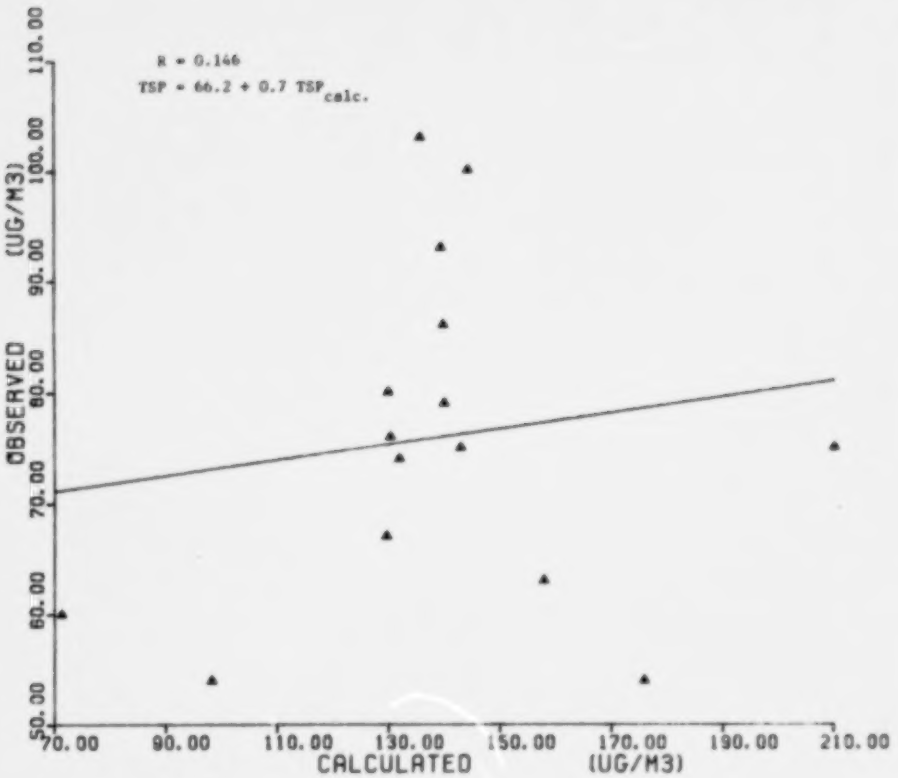


Figure 16. TSP calibration for the Akron/Canton AQMA with fugitive dust sources

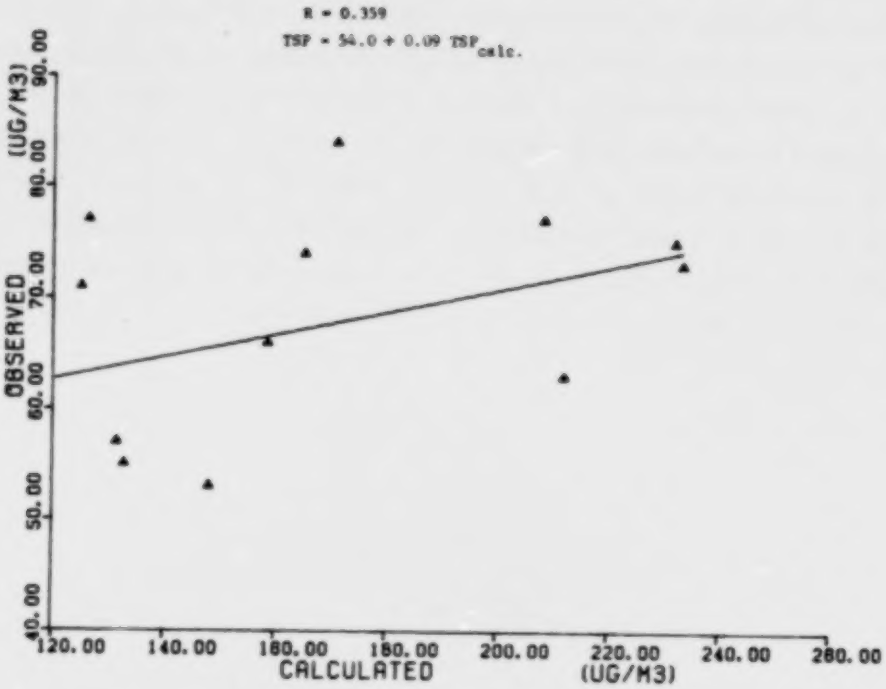


Figure 17. TSP calibration for the Toledo AQMA with fugitive dust sources

Akron/Canton and Toledo AQMAs are plotted, and in Tables 13 and 14 the input data and some statistical parameters derived from the calibration are tabulated. In both cases, the correlation coefficients are lower than when the model was run without fugitive sources, and the slopes are very shallow. These results indicate that the inclusion of fugitive emissions causes the model to severly over calculate the TSP levels and does not improve the correlation.

In order to improve the calibration, each monitor site should be examined to verify the coordinates, and the accuracy of the data. Additionally, each site should be evaluated to ascertain whether it is being strongly influenced by uninventoried fugitive sources. The previously mentioned tasks were beyond the scope of the contract, but in Figures 1 through 5 the location of the monitors is plotted along with the observed air quality, and this data could be used as a starting point in evaluating the observed air quality data.

Table 13. CALIBRATION DATA FOR THE AKRON/CANTON AQMA WITH FUGITIVE DUST SOURCES

```
RECEPTOR LOCATION         OBSERVED        CALC. PT.      CALC. AREA       TOTAL

453.10    4543.99           74.00           11.88          120.01         131.89
452.03    4551.71           67.00            7.55          122.03         129.58
453.38    4550.20           79.00           14.29          125.64         139.93
460.70    4545.76          100.00           16.46          127.79         144.25
456.56    4547.55          103.00           11.25          124.44         135.69
448.92    4540.59           80.00           15.83          114.07         129.90
453.07    4555.30           54.00            6.26          169.58         175.84
450.11    4532.74           76.00            8.52          121.76         130.28
463.06    4550.29           93.00           12.17          127.19         139.36
462.99    4573.42           86.00            6.21          133.53         139.74
456.20    4516.01           75.00           25.94          116.91         142.85
479.31    4533.32           75.00           25.95          186.20         212.13
470.37    4502.52           63.00           14.32          143.46         157.78
445.59    4500.47           60.00            4.93           66.34          71.27
446.51    4512.26           54.00            8.14           90.08          98.22

     XMEAN= 0.13858E+03                   STANDARD DEVIATION= 0.31243E+02
     YMEAN= 0.75933E+02                   STANDARD DEVIATION= 0.15116E+02
     CORR.COEFF.= 0.14582E+00             NO. OF POINTS=   15
     SLOPE= 0.73550E-01                   Y-INTERCEPT= 0.66155E+02
```

Table 14. CALIBRATION DATA FOR THE TOLEDO AQMA WITH FUGITIVE DUST SOURCES

RECEPTOR LOCATION		OBSERVED	CALC. PT.	CALC. AREA	TOTAL
280.61	4603.68	77.00	8.55	117.70	126.25
286.50	4609.20	53.00	7.80	140.18	147.98
266.10	4599.90	71.00	2.30	122.62	124.92
278.75	4604.48	74.00	23.77	141.43	165.20
298.50	4613.70	55.00	5.45	127.35	132.80
275.02	4621.55	57.00	3.16	128.23	131.39
290.40	4612.25	73.00	34.45	198.75	233.20
287.10	4611.75	75.00	11.73	220.10	231.83
283.00	4613.00	77.00	7.02	201.17	208.19
283.20	4620.30	63.00	4.87	206.97	211.84
293.70	4621.10	66.00	7.44	151.04	158.48
293.80	4617.20	84.00	12.55	158.27	170.82

XMEAN= 0.17024E+03 STANDARD DEVIATION= 0.40996E+02
YMEAN= 0.68750E+02 STANDARD DEVIATION= 0.98823E+01
CORR.COEFF.= 0.35858E+00 NO. OF POINTS= 12
SLOPE= 0.86436E-01 Y-INTERCEPT= 0.54036E+02

SECTION V

TSP AIR QUALITY

After each AQMA had been calibrated, the air quality was generated for each AQMA, and plotted in Figures 18 to 23. The receptor grid had a 5 km separation between receptors, and the grid completely encompassed the AQMA. Since there is some question as to the suitability of some monitor data for calibration purposes, and OEPA is aware of some inventory problems, the air quality values should not be looked upon as being quantitavely accurate, but rather as a display of the relative air quality in various regions of each AQMA.

From Figures 18 to 23, OEPA and GCA developed a 2.5 km receptor grid which encompassed the region in each AQMA which had the highest calculated air quality values. The dashed boxes in Figures 18 to 23 represent the boundary of the region for which the 2.5 km grid was developed, and the area source contribution to each receptor for the 2.5 km receptor grid was then calculated.

When the Ohio Point Source Inventory for a region has been verified, the point source contribution to the air quality can be calculated at each receptor, and added to the area source contribution. Once the total calculated air quality is available, the model can be validated with the monitor data, and the resulting calibration constants applied to the calculated air quality to obtain the actual air quality for the region.

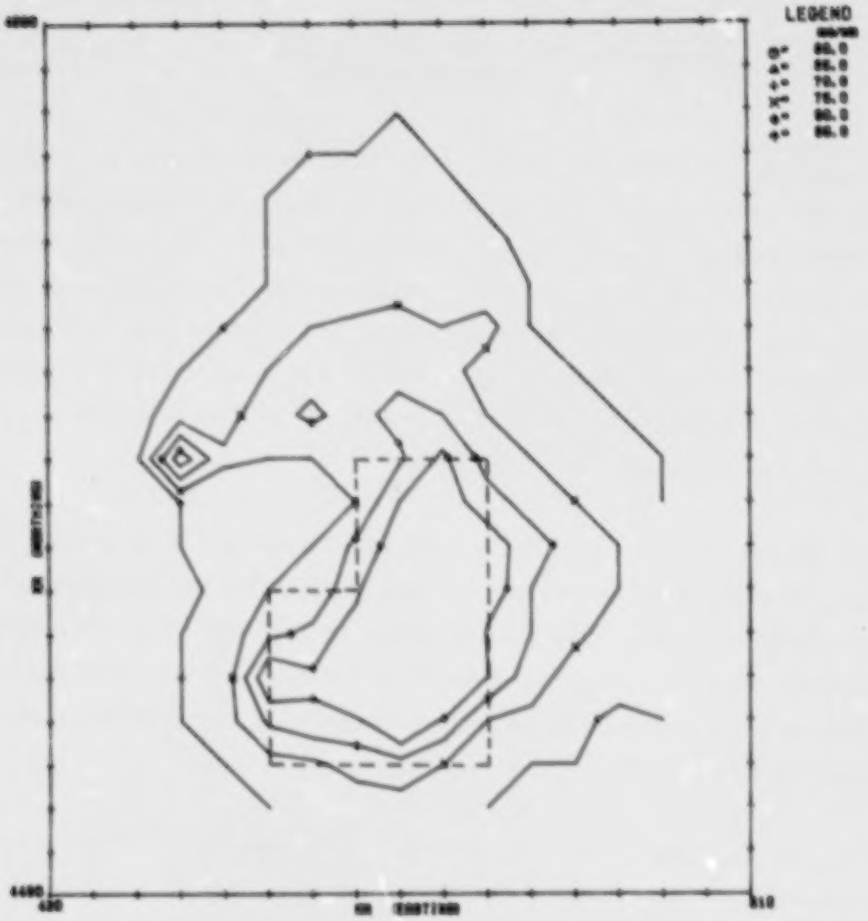

LEGEND
KM EASTING
KM NORTHING
510

Figure 18. TSP air quality for the Akron/Canton AQMA

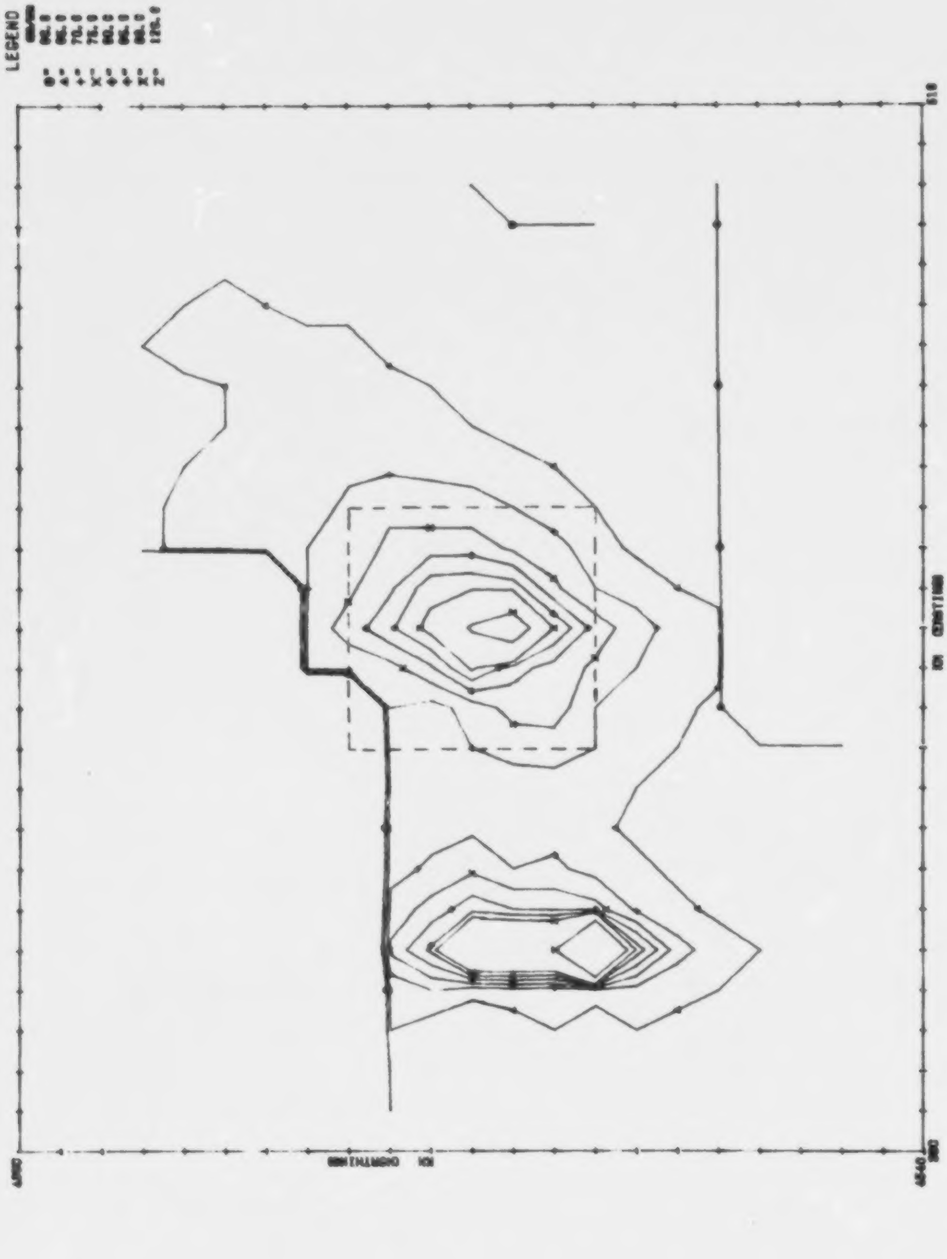

LEGEND
KM EASTING
KM NORTHING

Figure 19. TSP air quality for the Cleveland AQMA

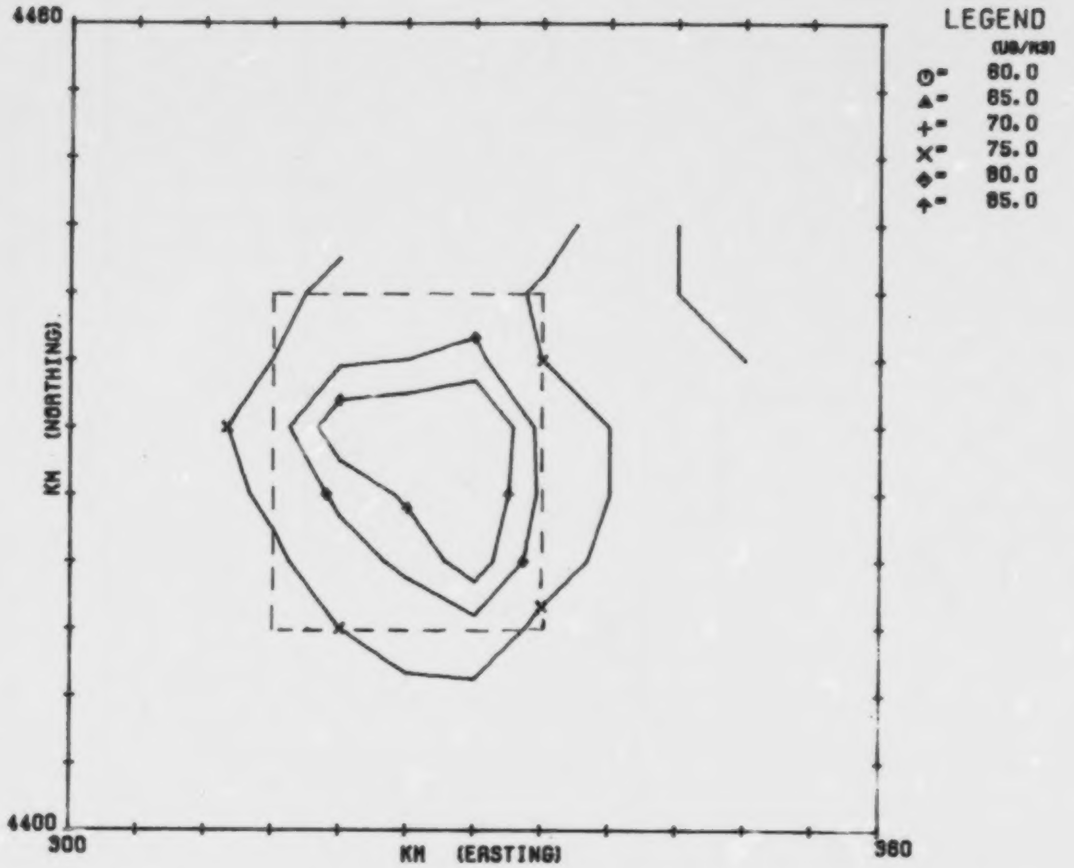

4460
4400
300
360
KM (NORTHING)
KM (EASTING)
LEGEND
(UG/M3)
⊙= 60.0
▲= 65.0
+= 70.0
×= 75.0
◆= 80.0
↑= 85.0

Figure 20. TSP air quality for the Columbus AQMA

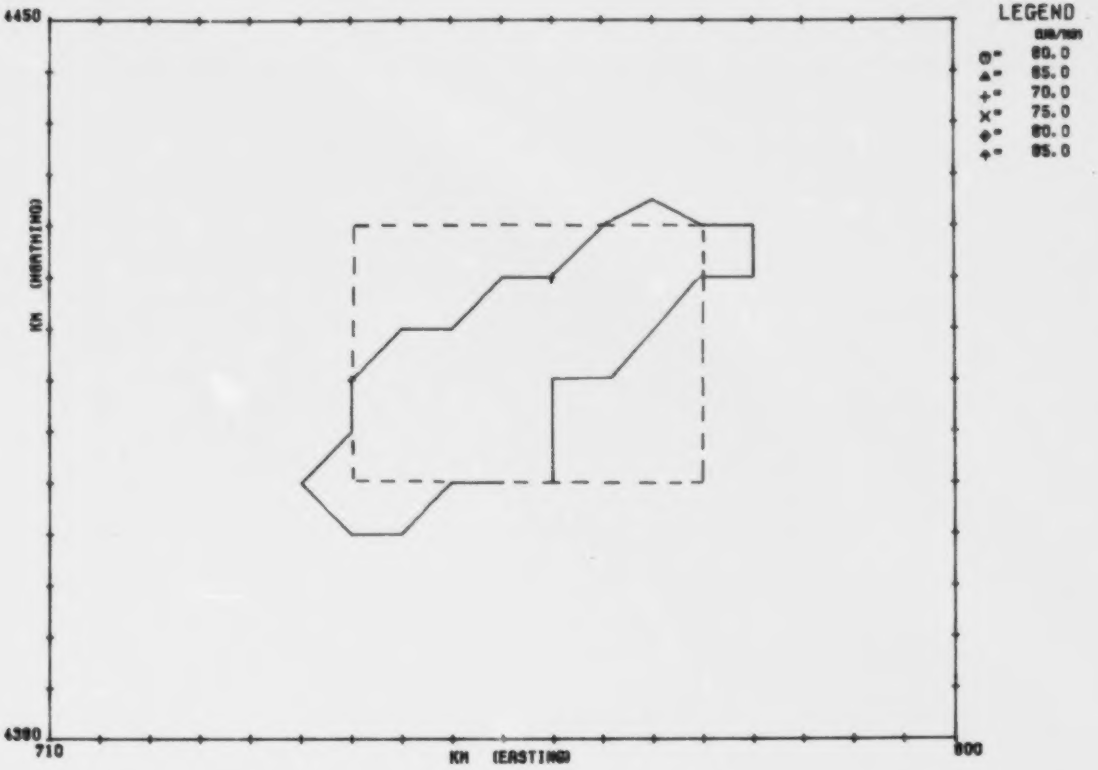

4450
4390
710
800
KM (NORTHING)
KM (EASTING)
LEGEND
⊙= 60.0
▲= 65.0
+= 70.0
×= 75.0
◆= 80.0
✦= 85.0

Figure 21. TSP air quality for the Dayton AQMA

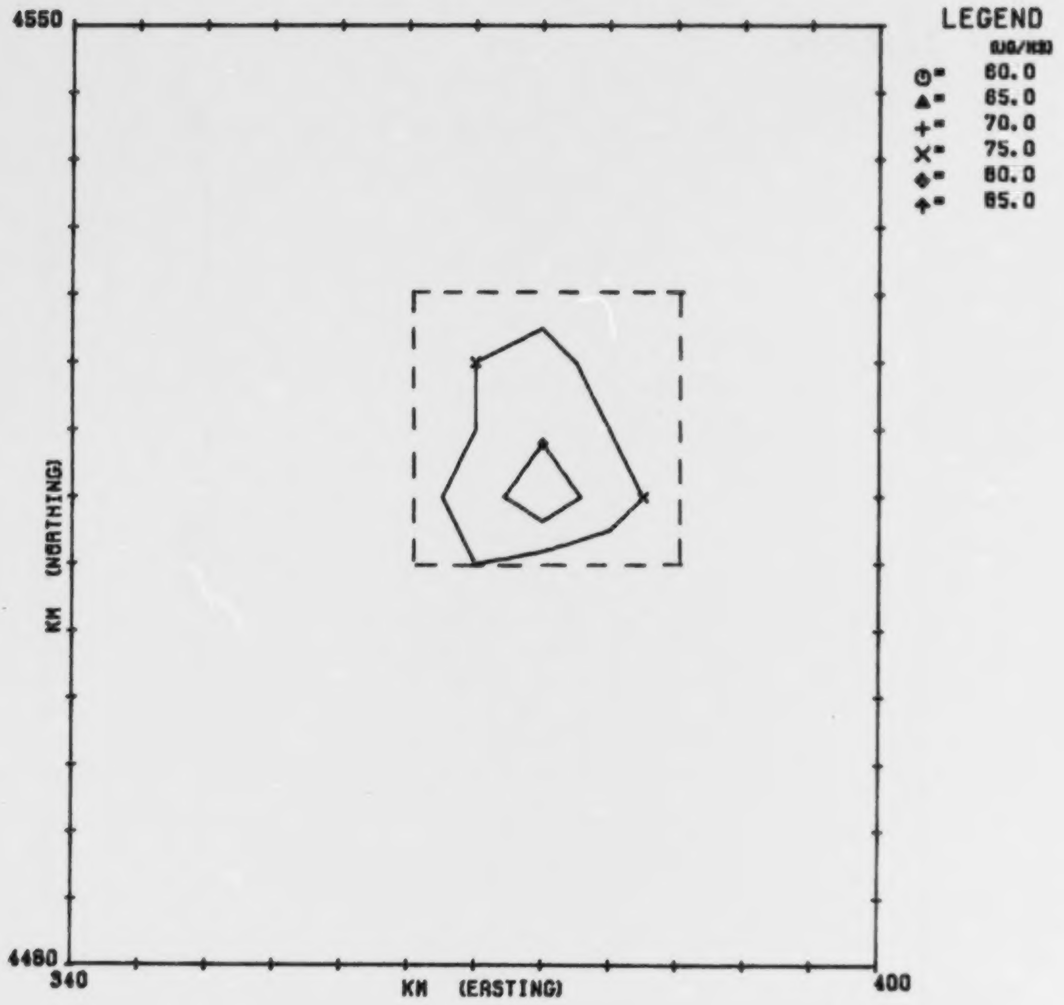


Figure 22. TSP air quality for the Mansfield AQMA

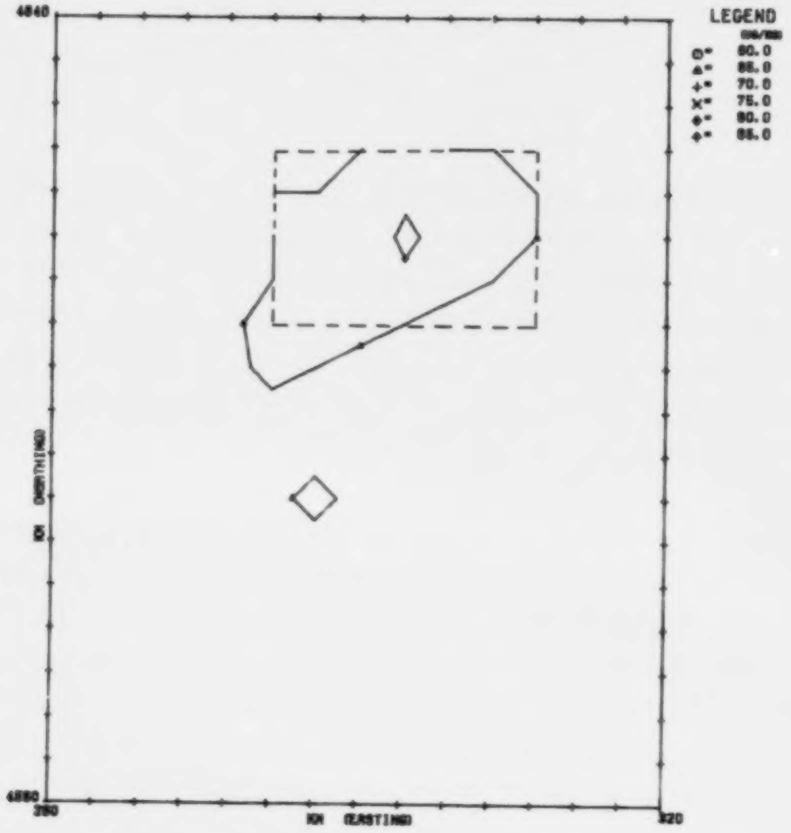


Figure 23. TSP air quality for the Toledo AQMA

SECTION VI

PROJECTION OF EMISSION INVENTORY

INTRODUCTION

As part of EPA Air Quality Maintenance Planning, it is required that the states predict future air quality to determine if air quality standards will be maintained. For planning purposes, it was decided to predict air quality for the years 1980 and 1985. OBERS projection data for the various SMSAs in Ohio was utilized, and all projection data was normalized to the base year 1974, since an emission inventory was available for that year.

Table 15 lists the area source categories, and the parameter utilized for the projection of emissions. The growth factors for population, commercial/institutional, and industrial area sources were developed from OBERs data and are tabulated in Table 16. Some categories were not projected since growth in those fuel usages is not occurring, e.g., natural gas and residential heating with coal. Since all residential heating was projected to be oil or electricity, the growth factor for residential distillate oil was adjusted by the inverse ratio of the market held by oil and electricity in 1974. Thus, in all counties the rate of increase in distillate oil used for residential heating was substantially above the population growth rate. The degree days utilized to calculate the heating fuel requirements were adjusted to the 10-year climatological average before the growth factors were applied. Additionally, the fugitive sources were not projected, since there is some question about their accuracy.

Table 15. PROJECTION PARAMETER FOR AREA SOURCE CATEGORIES

Category number	Major classification	Minor classification	Projection parameter
1	Residential fuel	Anthracite coal	NP[a]
2	Residential fuel	Bituminous coal	NP
3	Residential fuel	Distillate oil	Population
4	Residential fuel	Residual oil	NP
5	Residential fuel	Natural gas	NP
6	Residential fuel	Wood	NP
7	Comm'l & institl fuel	Anthracite coal	C/I employment
8	Comm'l & institl fuel	Bituminous coal	C/I employment
9	Comm'l & institl fuel	Distillate oil	C/I employment
10	Comm'l & institl fuel	Residual oil	C/I employment
11	Comm'l & institl fuel	Natural gas	NP
12	Comm'l & institl fuel	Wood	C/I employment
13	Industrial fuel	Anthracite coal	Industrial employment
14	Industrial fuel	Bituminous coal	Industrial employment
15	Industrial fuel	Coke	NP
16	Industrial fuel	Distillate oil	Industrial employment
17	Industrial fuel	Residual oil	Industrial employment
18	Industrial fuel	Natural gas	NP
19	Industrial fuel	Wood	Industrial employment
20	Industrial fuel	Process gas	Industrial employment
21	On-site incineration	Residential	NP
22	On-site incineration	Industrial	NP
23	On-site incineration	Comm'l & institl	NP
24	Open burning	Residential	NP
25	Open burning	Industrial	NP
26	Open burning	Comm'l & institl	NP
27	Gasoline fuel	Light vehicle	Average VMT growth
28	Gasoline fuel	Heavy vehicle	Average VMT growth
29	Gasoline fuel	Off highway	Average VMT growth
30	Diesel fuel	Heavy vehicle	Average VMT growth
31	Diesel fuel	Off highway	Average VMT growth
32	Diesel fuel	Rail locomotive	Population
33	Aircraft	Military	Projected aircraft operation
34	Aircraft	Civil	Projected aircraft operation
35	Aircraft	Commercial	Projected aircraft operation
36	Vessels	Anthracite coal	NP
37	Vessels	Diesel oil	Population
38	Vessels	Residual oil	Population
39	Vessels	Gasoline	NP
40	Evaporation	Solvent purchased	Population

Table 15 (continued). PROJECTION PARAMETER FOR AREA SOURCE CATEGORIES

Category number	Major classification	Minor classification	Projection parameter
41	Evaporation	Gas marketed	Average VMT growth
42	Measured VEH miles	Limited access roads	Limited access road VMT
43	Measured VEH miles	Rural roads	Rural road VMT
44	Measured VEH miles	Suburban roads	Suburban road VMT
45	Measured VEH miles	Urban roads	Urban road VMT
46	Dirt roads traveled	-	NP
47	Dirt airstrips	-	NP
48	Construct land area	-	NP
49	Rock handling & storage	-	NP
50	Forest fires	Area-acres	NP
51	Slash burning	Area-acres	NP
52	Frost control	Orchard heaters	NP
53	Structure fires	No. year	NP
54	Coal refuse burning	Size of bank	NP

[a] NP = No growth was projected for this category.

Table 16. GROWTH FACTORS FOR POPULATION, INDUSTRIAL AND COMMERCIAL/INSTITUTIONAL AREA SOURCES

SMSA	1980			1985		
	Population	Industrial	Commercial/ institutional	Population	Industrial	Commercial/ institutional
Akron (Portage, Summit)	1.04	1.24	1.29	1.07	1.39	1.53
Canton (Stark)	1.02	1.15	1.32	1.03	1.26	1.58
Cincinnati (Clermont, Hamilton, Warren)	1.05	1.23	1.30	1.10	1.41	1.56
Cleveland (Cuyahoga, Geauga, Lake)	1.05	1.22	1.29	1.08	1.36	1.52
Columbus (Franklin)	1.13	1.34	1.34	1.22	1.61	1.66
Dayton (Montgomery, Greene)	1.07	1.29	1.30	1.13	1.47	1.57
Hamilton-Middleton (Butler)	1.07	1.20	1.37	1.12	1.34	1.71
Lorain-Elyria (Lorain)	1.05	1.23	1.37	1.10	1.41	1.69
Mansfield (Richland)	1.07	1.28	1.36	1.11	1.43	1.64
Springfield (Clark)	1.01	1.19	1.32	1.04	1.35	1.59
Steubenville (Jefferson, Columbiana)	0.97	1.03	1.31	0.94	1.05	1.55
Toledo (Lucas, Wood)	1.06	1.24	1.32	1.11	1.43	1.60
Wheeling (Belmont, Monroe)	0.97	1.18	1.24	0.96	1.30	1.44

The growth factors for VMT were obtained from the Ohio Department of Transportation, and are found in Table 17. The growth factor for aircraft operations was obtained from a study performed by the Ohio Department of Transportation and the factors utilized for each AQMA are tabulated in Table 18.

In Tables 19 and 20, the area source emissions for various categories are tabulated for the two projection years, and in Figures 24 through 39 the particulate area emission densities for 1980 and 1985 are plotted for each AQMA. Figures 40a to 40v display the 1980 total area emission rate in tons/year for each grid square, and Figures 41a to 41v display the 1985 data.

Table 17. PROJECTION FACTORS FOR VMT AND VEHICULAR FUELS

Category	1980	1985
Gasoline and diesel fuels	1.14	1.26
Limited access roads	1.28	1.52
Rural roads	1.12	1.22
Suburban roads	1.08	1.15
Urban roads	1.08	1.15

Table 18. PROJECTED AIRCRAFT OPERATIONS

AQMA	1980	1985
Akron/Canton	1.61[a]	2.28[a]
Cincinnati	1.28	1.55
Cleveland	1.68[a]	1.99[a]
Columbus	1.42	1.80
Dayton	1.42	1.80
Mansfield	1.30	1.59
Steubenville	1.37[b]	1.71[b]
Toledo	1.37	1.73

[a] Data from the Lerder Study, obtained through Lake Area Transportation Authority.

[b] Average growth rate from the Ohio Department of Aviation.

Table 19. PARTICULATE AREA SOURCE EMISSIONS FOR 1980

Area source categories	Belmont	Butler	Clark	Clermont	Columbiana	Cuyahoga	Franklin	Geauga	Greene	Hamilton	Jefferson
Residential coal	364	117	47	74	343	219	156	72	23	326	293
Residential distillate oil	6	32	10	29	9	37	57	22	17	41	8
Residential natural gas	13	33	32	4	19	410	195	3	19	165	14
Commercial institutional coal	0	0	0	0	0	0	0	0	0	0	0
Commercial institutional distillate oil	1	8	4	1	3	48	20	1	1	33	2
Commercial institutional residual oil	1	5	4	0	2	45	17	1	1	23	2
Commercial institutional natural gas	3	20	12	2	8	177	55	4	3	99	7
Industrial coal	0	0	0	0	0	0	0	0	0	0	0
Industrial distillate oil	0	0	0	0	0	0	0	0	0	0	0
Industrial residual oil	0	0	0	0	0	0	0	0	0	0	0
Industrial natural gas	10	22	26	8	13	420	249	5	14	250	12
Incineration	0	0	0	0	0	0	0	0	0	0	0
Open burning	0	0	0	0	0	0	0	0	0	0	0
Off highway fuel usage	21	63	41	27	29	432	225	17	33	239	26
Aircraft operations	2	28	84	5	11	84	203	6	11	55	5
Vessel operations	0	0	0	0	0	67	0	0	0	6	0
Motor vehicle emissions	359	1,211	743	583	517	5,402	3,585	326	588	3,581	444
Railroads & miscellaneous	31	36	32	11	26	36	58	27	8	49	29
TOTAL[a]	813	1,573	1,035	743	979	7,376	4,818	484	717	4,867	843

[a] Totals vary due to round-off.

Table 19 (continued). PARTICULATE AREA SOURCE EMISSIONS FOR 1980

Area source categories	Lake	Lorain	Lucas	Monroe	Montgomery	Portage	Richland	Stark	Summit	Warren	Wood
Residential coal	27	65	86	27	83	143	79	314	115	51	39
Residential distillate oil	23	12	37	1	29	19	13	24	29	17	11
Residential natural gas	36	57	108	3	126	18	26	81	128	7	18
Commercial institutional coal	0	0	0	0	0	0	0	0	0	0	0
Commercial institutional distillate oil	5	10	15	0	25	2	6	14	20	1	3
Commercial institutional residual oil	4	8	0	0	22	2	5	12	17	1	3
Commercial institutional natural gas	15	26	43	0	67	6	0	40	55	2	9
Industrial coal	0	0	0	0	0	0	0	0	0	0	0
Industrial distillate oil	0	0	0	0	0	0	0	0	0	0	0
Industrial residual oil	0	0	0	0	0	0	0	0	0	0	0
Industrial natural gas	25	37	106	0	126	12	26	57	111	4	3
Incineration	0	0	0	0	0	0	0	0	0	0	0
Open burning	0	0	0	0	0	0	0	0	0	0	0
Off highway fuel usage	53	70	127	4	157	34	34	100	145	23	26
Aircraft operations	49	67	65	1	99	3	41	103	180	9	20
Vessel operations	32	0	37	0	0	0	0	0	0	0	0
Motor vehicle emissions	1,319	1,198	1,785	64	2,246	666	721	1,444	2,312	674	460
Railroads & miscellaneous	21	42	44	7	37	37	35	49	46	16	41
TOTAL[a]	1,609	1,592	2,451	108	3,016	941	986	2,238	3,157	801	631

[a] Totals vary due to round-off.

Table 20. PARTICULATE AREA SOURCE EMISSIONS FOR 1985

Area source categories	Belmont	Butler	Clark	Clermont	Columbiana	Cuyahoga	Franklin	Geauga	Greene	Hamilton	Jefferson
Residential coal	364	117	47	74	343	219	156	72	23	326	295
Residential distillate oil	6	36	12	30	8	50	81	22	19	53	7
Residential natural gas	13	33	32	4	19	410	195	3	19	165	14
Commercial institutional coal	0	0	0	0	0	0	0	0	0	0	0
Commercial institutional distillate oil	1	9	5	1	3	57	25	1	1	39	3
Commercial institutional residual oil	1	6	5	1	3	53	21	1	1	27	2
Commercial institutional natural gas	3	20	12	2	8	177	55	4	3	99	7
Industrial coal	0	0	0	0	0	0	0	0	0	0	0
Industrial distillate oil	0	0	0	0	0	0	0	0	0	0	0
Industrial residual oil	0	0	0	0	0	0	0	0	0	0	0
Industrial natural gas	10	22	26	8	13	420	249	5	14	250	12
Incineration	0	0	0	0	0	0	0	0	0	0	0
Open burning	0	0	0	0	0	0	0	0	0	0	0
Off highway fuel usage	24	69	46	30	32	476	248	19	37	264	28
Aircraft operations	3	34	87	6	15	96	233	8	14	65	6
Vessel operations	0	0	0	0	0	68	0	0	0	6	0
Motor vehicle emissions	387	1,331	799	643	557	6,078	4,062	355	631	4,079	478
Railroads & miscellaneous	31	38	33	11	25	37	63	27	8	51	28
TOTAL[a]	843	1,715	1,102	810	1,026	8,142	5,387	517	769	5,425	881

[a] Totals vary due to round-off.

Table 20 (continued). PARTICULATE AREA SOURCE EMISSIONS FOR 1985

Area source categories	Lake	Lorain	Lucas	Monroe	Montgomery	Portage	Richland	Stark	Summit	Warren	Wood
Residential coal	27	65	84	27	83	143	79	314	115	51	39
Residential distillate oil	26	17	46	1	38	20	15	25	36	19	13
Residential natural gas	36	57	108	3	126	18	24	81	128	7	18
Commercial institutional coal	0	0	0	0	0	0	0	0	0	0	0
Commercial institutional distillate oil	6	12	18	0	30	3	7	17	24	1	4
Commercial institutional residual oil	5	10	0	0	26	2	6	15	20	1	3
Commercial institutional natural gas	15	26	43	0	67	6	0	40	55	2	9
Industrial coal	0	0	0	0	0	0	0	0	0	0	0
Industrial distillate oil	0	0	0	0	0	0	0	0	0	0	0
Industrial residual oil	0	0	0	0	0	0	0	0	0	0	0
Industrial natural gas	25	37	106	0	126	12	26	57	111	4	3
Incineration	0	0	0	0	0	0	0	0	0	0	0
Open burning	0	0	0	0	0	0	0	0	0	0	0
Off highway fuel usage	58	77	141	4	172	37	37	110	161	26	28
Aircraft operations	57	78	74	1	123	4	45	132	219	11	25
Vessel operations	33	0	39	0	0	0	0	0	0	0	0
Motor vehicle emissions	1,482	1,282	2,027	69	2,535	717	815	1,611	2,615	761	495
Railroads & miscellaneous	22	44	46	7	39	38	36	50	47	14	42
TOTAL[a]	1,791	1,705	2,732	114	3,365	1,000	1,092	2,451	3,529	895	679

[a] Totals vary due to round-off.

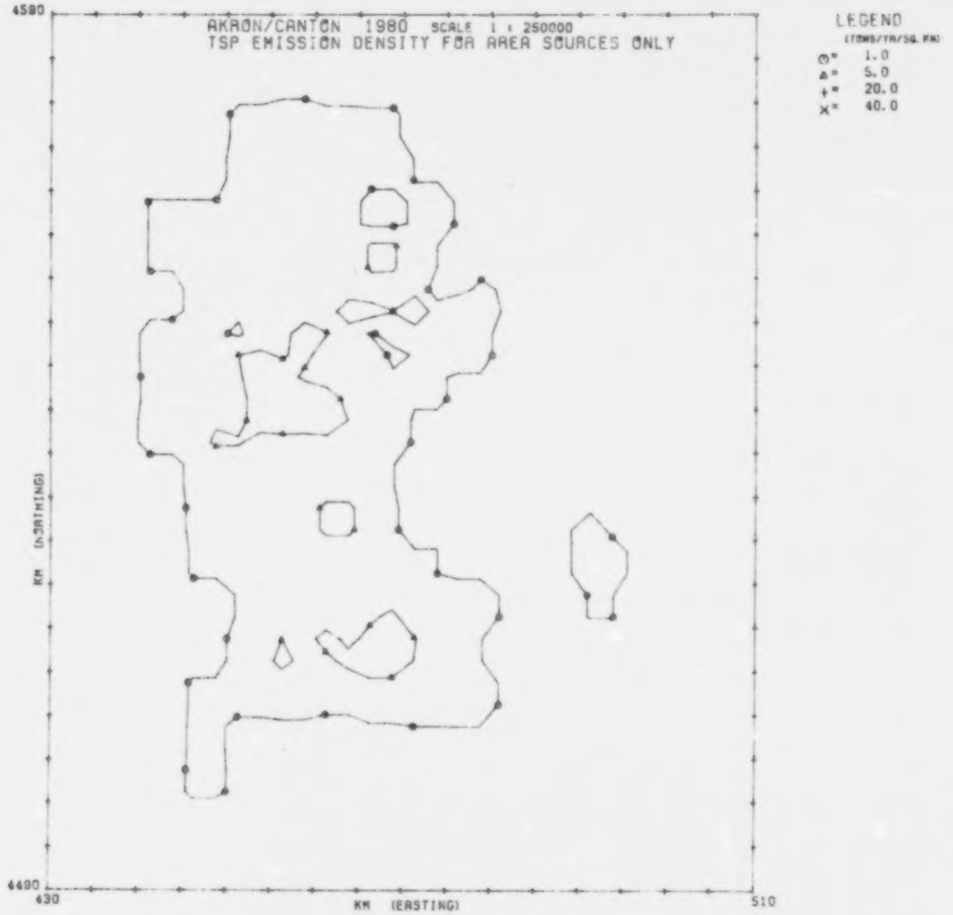

AKRON/CANTON 1980 SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
(TONS/YR/SQ. KM)
⊙= 1.0
▲= 5.0
+= 20.0
×= 40.0
4580
4490
430
510
KM (EASTING)
KM (NORTHING)

Figure 24. Particulate emission density for the Akron/Canton AQMA (1980)

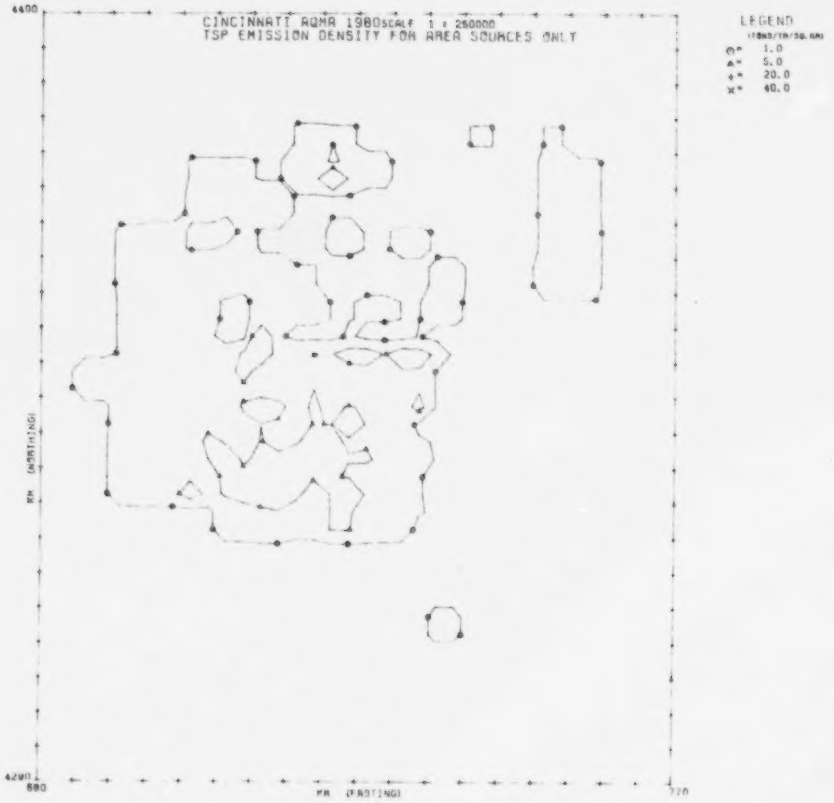

CINCINNATI AQMA 1980 SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
(TONS/YR/SQ.KM)
O = 1.0
Δ = 5.0
+ = 20.0
x = 40.0
4400
4200
680
720
KM (NORTHING)
KM (EASTING)

Figure 25. Particulate emission density for the Cincinnati AQMA (1980)

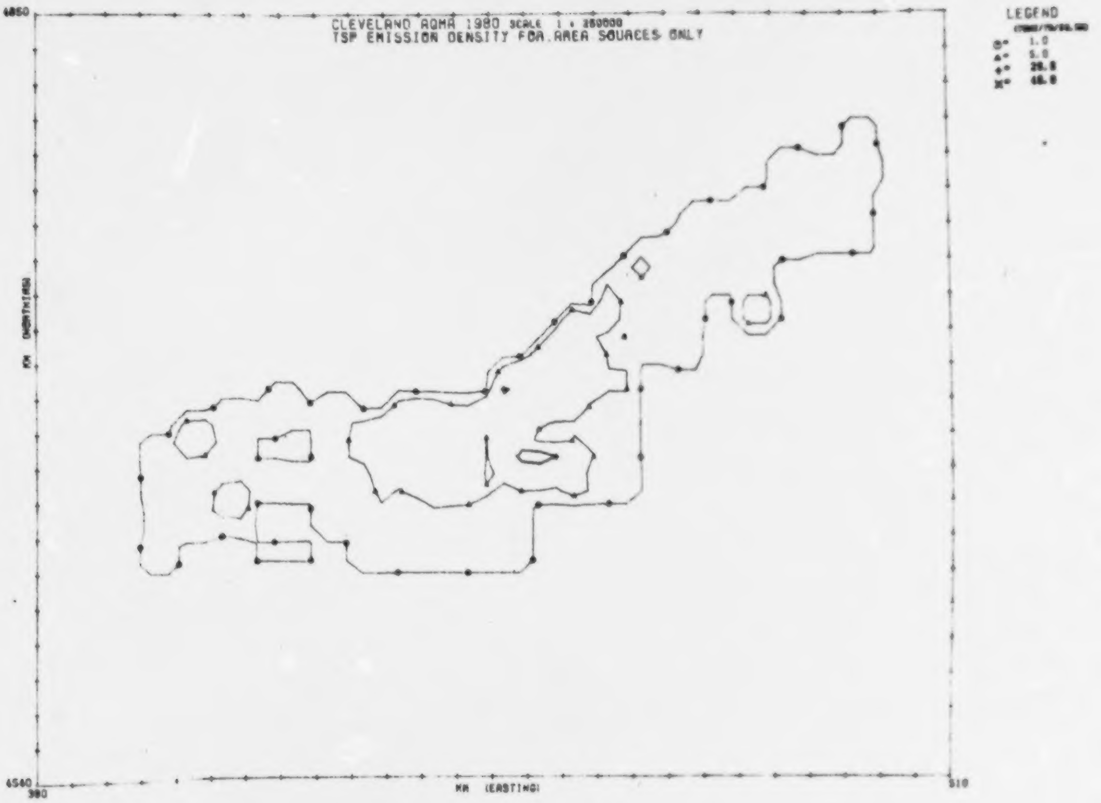

CLEVELAND AQMA 1980 SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
1.0
5.0
4860
4540
380
510
KM (NORTHING)
KM (EASTING)

Figure 26. Particulate emission density for the Cleveland AQMA (1980)

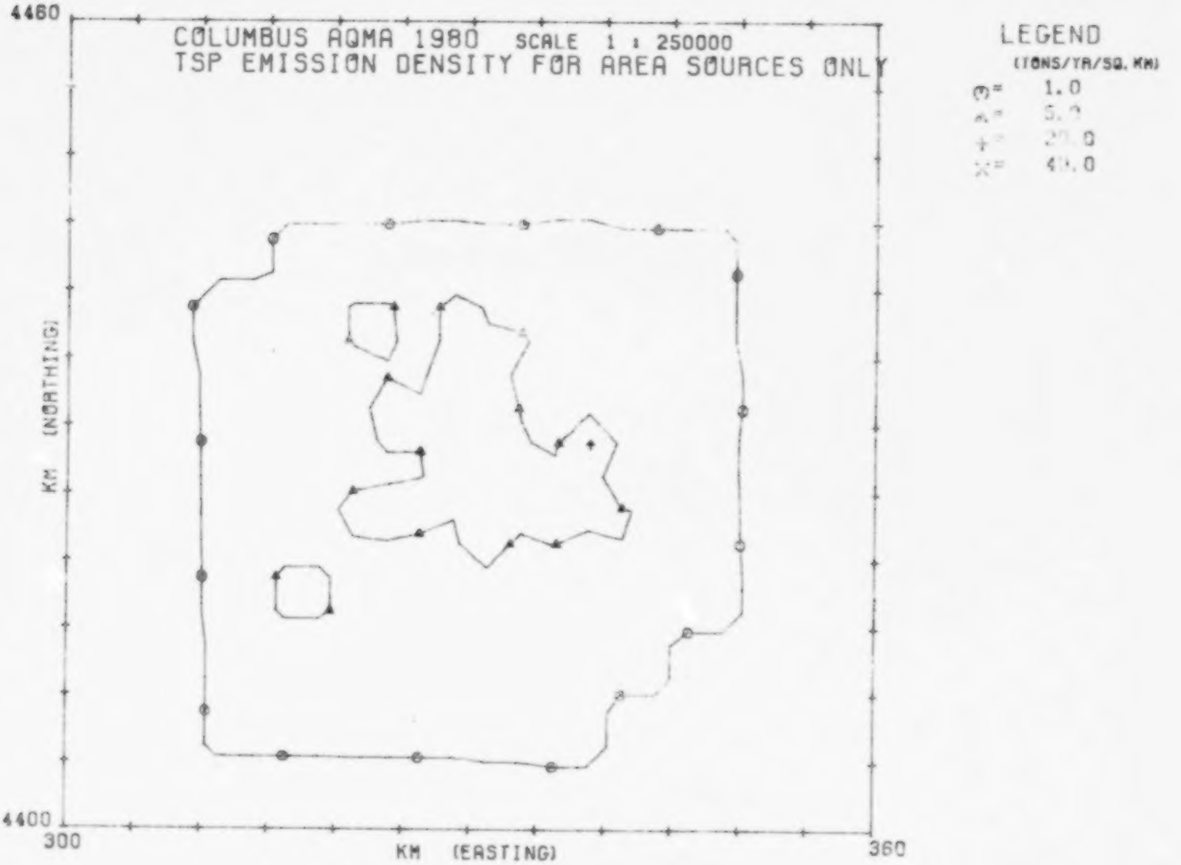

COLUMBUS AQMA 1980 SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
(TONS/YR/SQ. KM)
⊙= 1.0
△= 5.0
+= 20.0
×= 40.0
4460
4400
300
360
KM (NORTHING)
KM (EASTING)

Figure 27. Particulate emission density for the Columbus AQMA (1980)

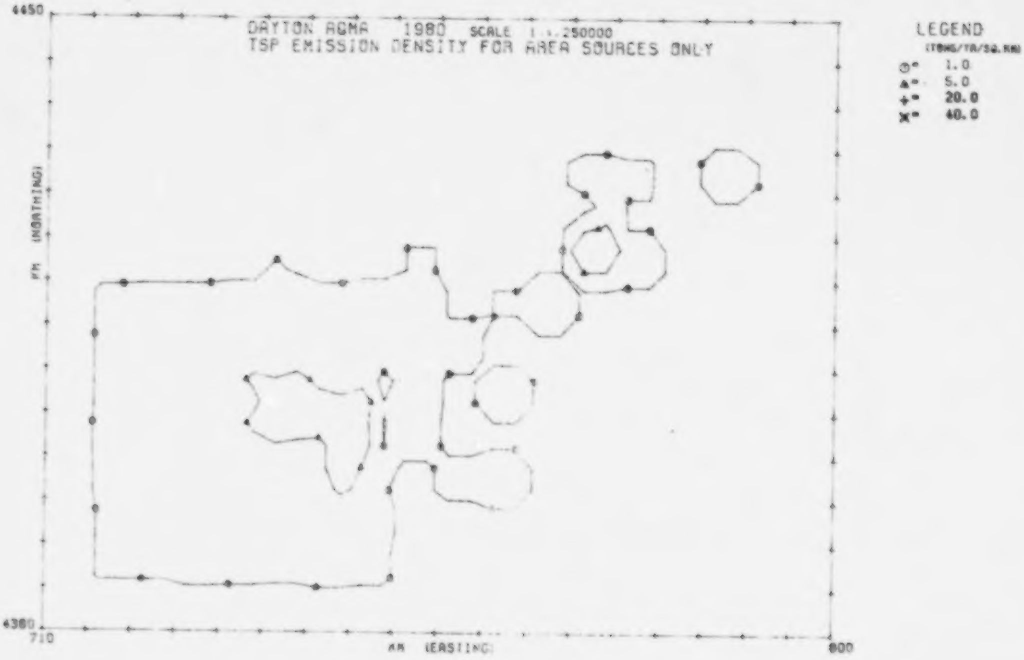

DAYTON AQMA 1980 SCALE 1:250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
(TONS/YR/SQ.KM)
⊙= 1.0
▲= 5.0
+= 20.0
×= 40.0
4450
4380
710
800
KM (EASTING)
KM (NORTHING)

Figure 28. Particulate emission density for the Dayton AQMA (1980)

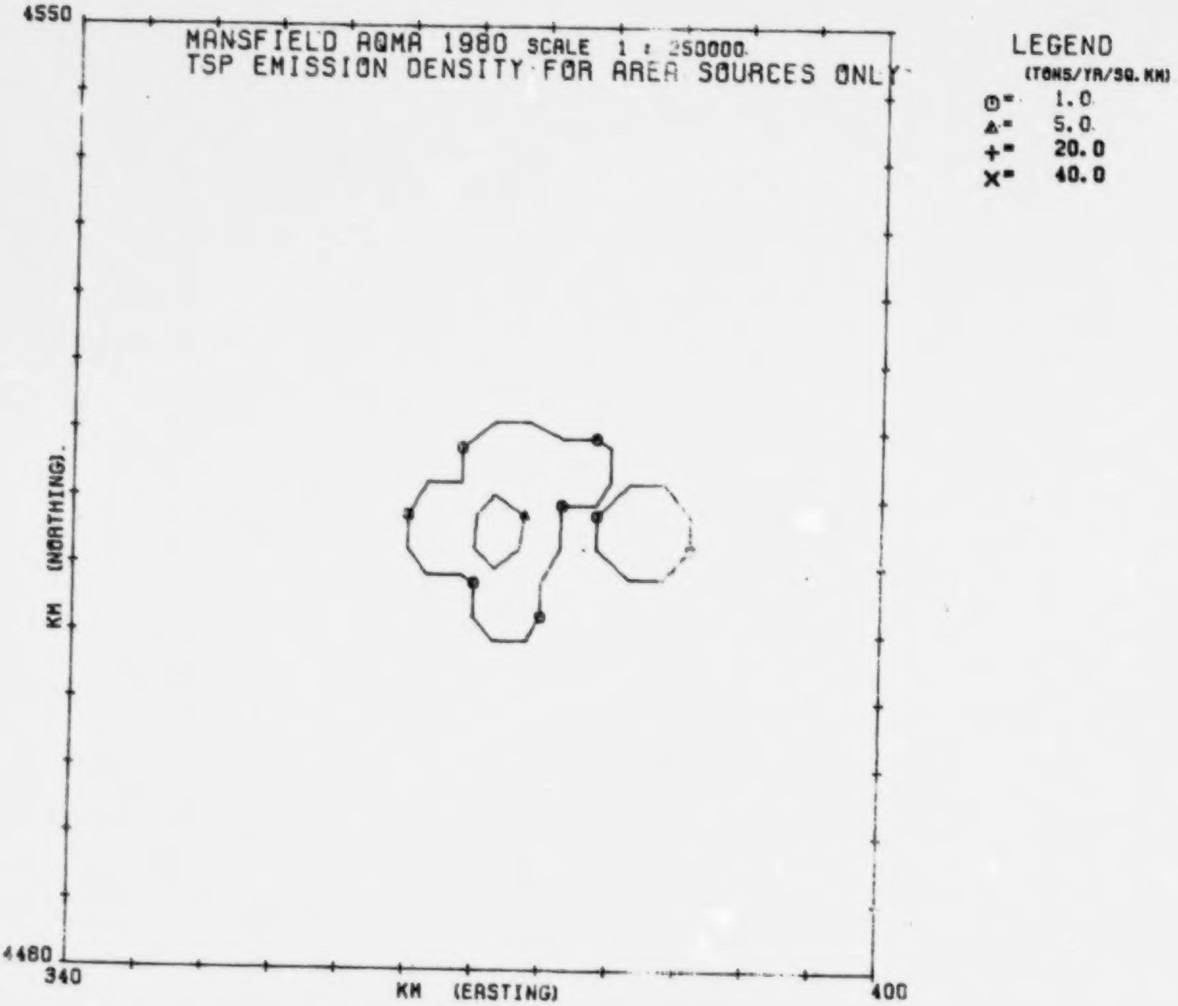

4550
MANSFIELD AQMA 1980 SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
(TONS/YR/SQ. KM)
⊙= 1.0
△= 5.0
+= 20.0
×= 40.0
KM (NORTHING)
4480
340
KM (EASTING)
400

Figure 29. Particulate emission density for the Mansfield AQMA (1980)

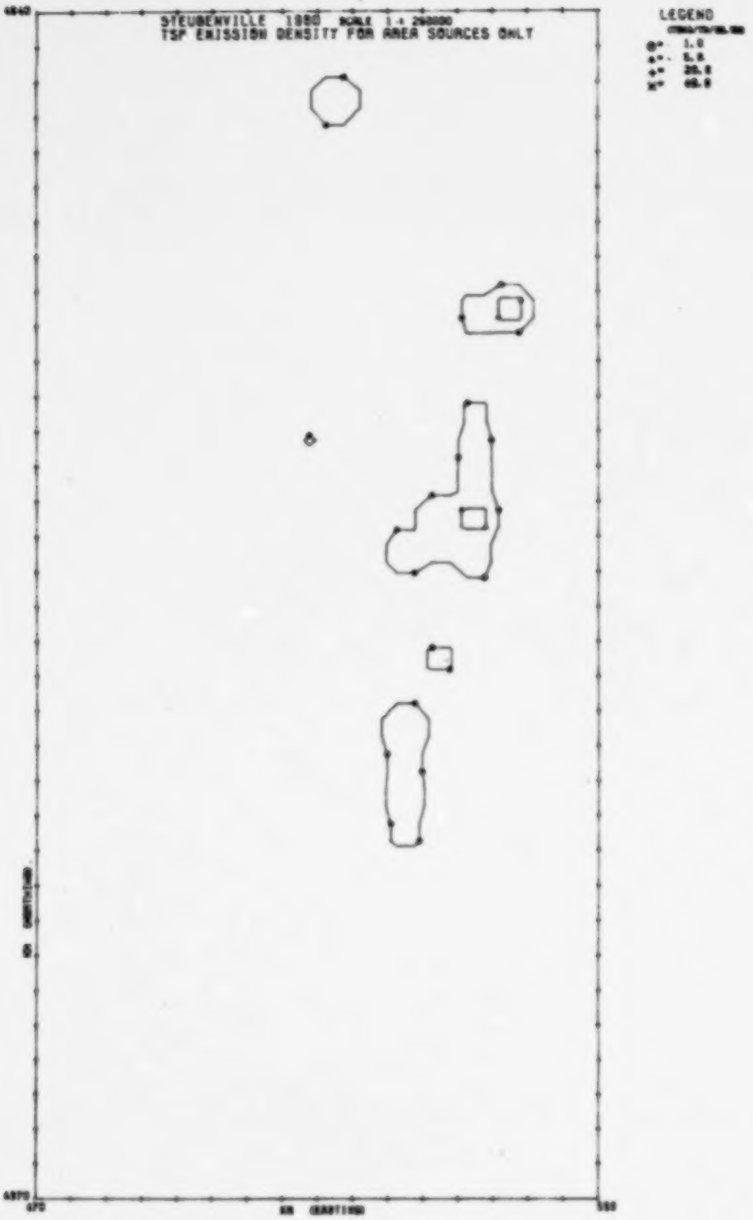

STEUBENVILLE 1980
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND

Figure 30. Particulate emission density for the Steubenville AQMA (1980)

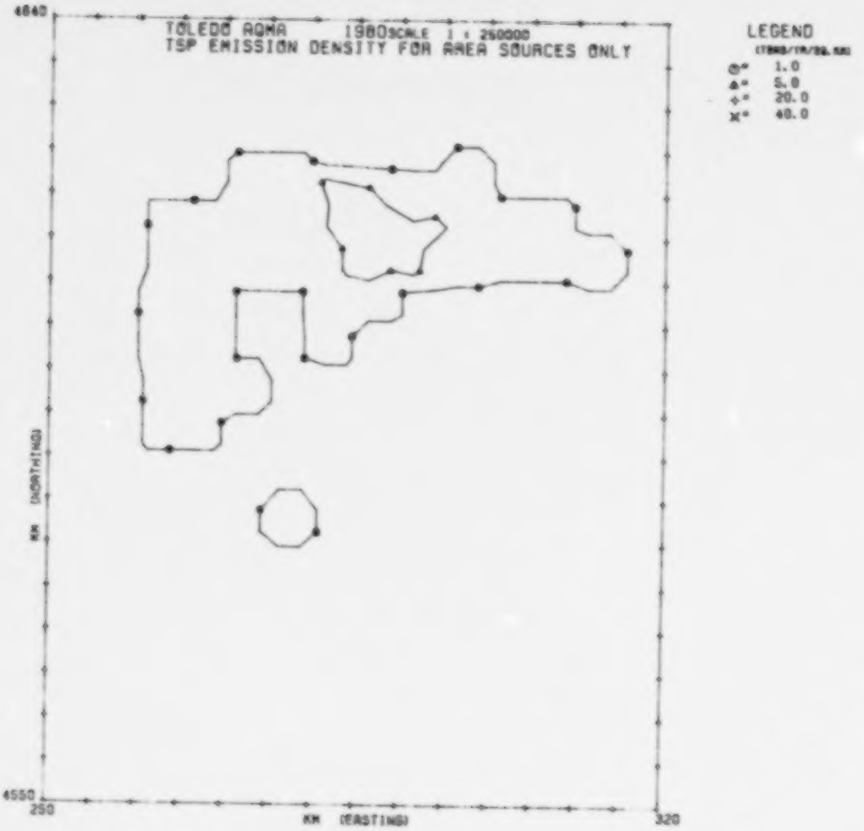

4640
TOLEDO AQMA 1980 SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
(TONS/YR/SQ.KM)
● = 1.0
▲ = 5.0
+ = 20.0
X = 40.0
KM (NORTHING)
4550
250
KM (EASTING)
320

Figure 31. Particulate emission density for the Toledo AQMA (1980)

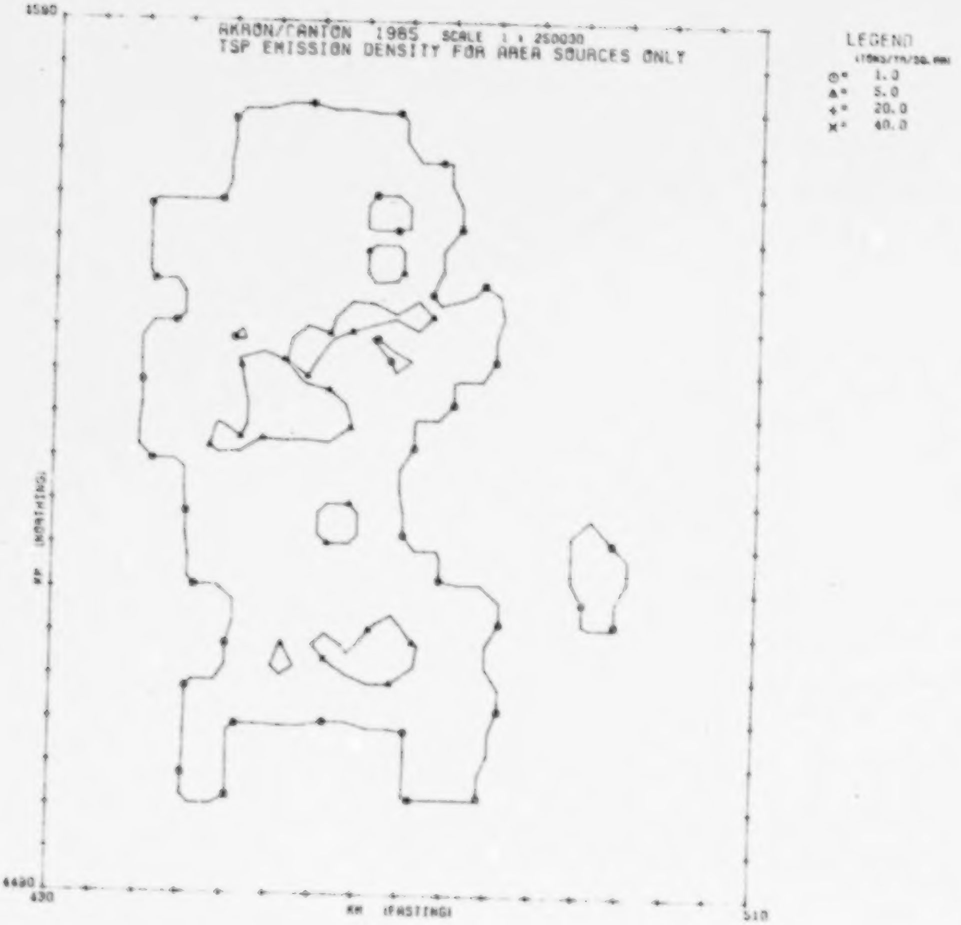

4590
AKRON/CANTON 1985 SCALE 1 : 250030
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
(TONS/YR/SQ.KM)
⊙= 1.0
▲= 5.0
+= 20.0
✕= 40.0
KM (NORTHING)
4490
430
KM (EASTING)
510

Figure 32. Particulate emission density for the Akron/Canton AQMA (1985)

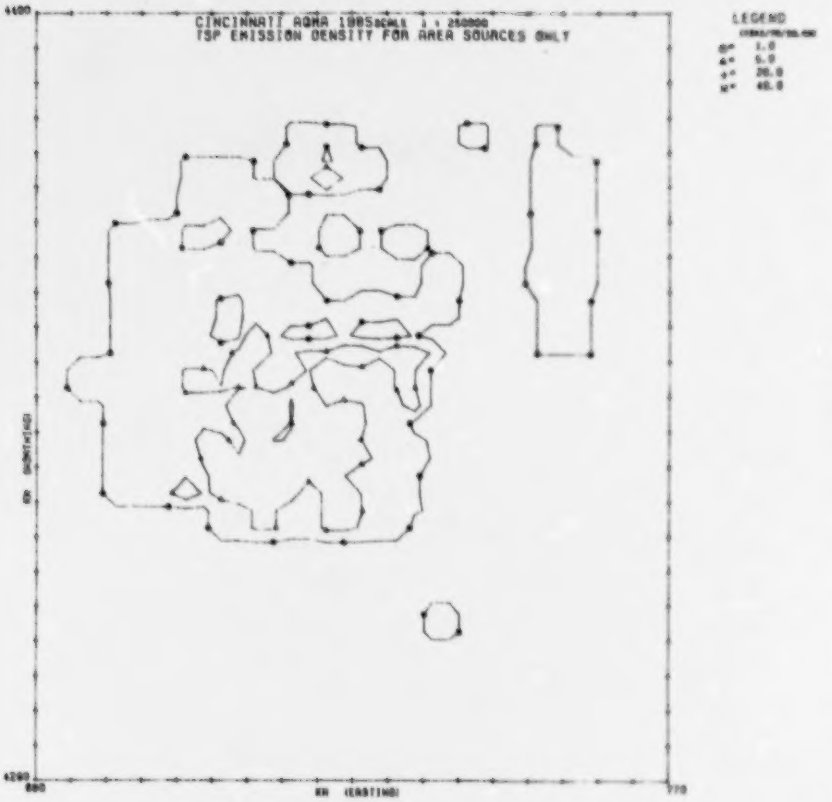

CINCINNATI AQMA 1985 SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
1.0
5.0
20.0
40.0
KM (NORTHING)
KM (EASTING)

Figure 33. Particulate emission density for the Cincinnati AQMA (1985)

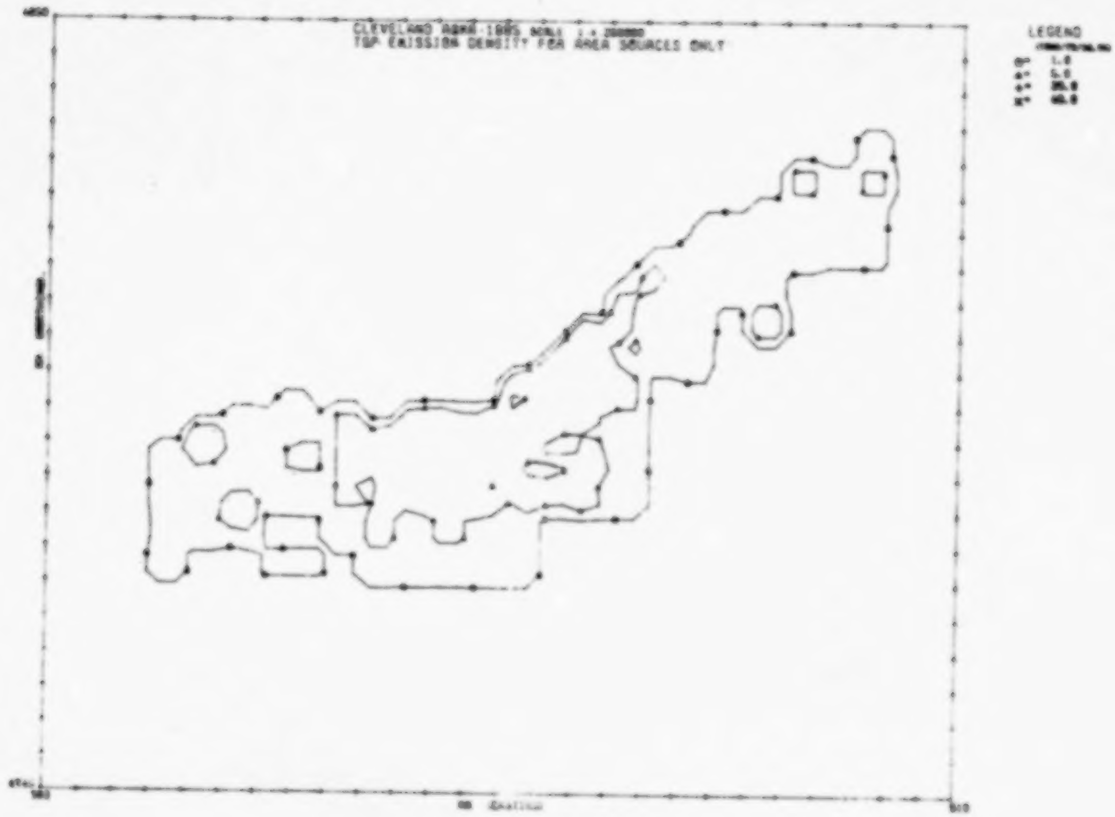

CLEVELAND AQMA 1985
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
1.0
5.0

Figure 34. Particulate emission density for the Cleveland AQMA (1985)

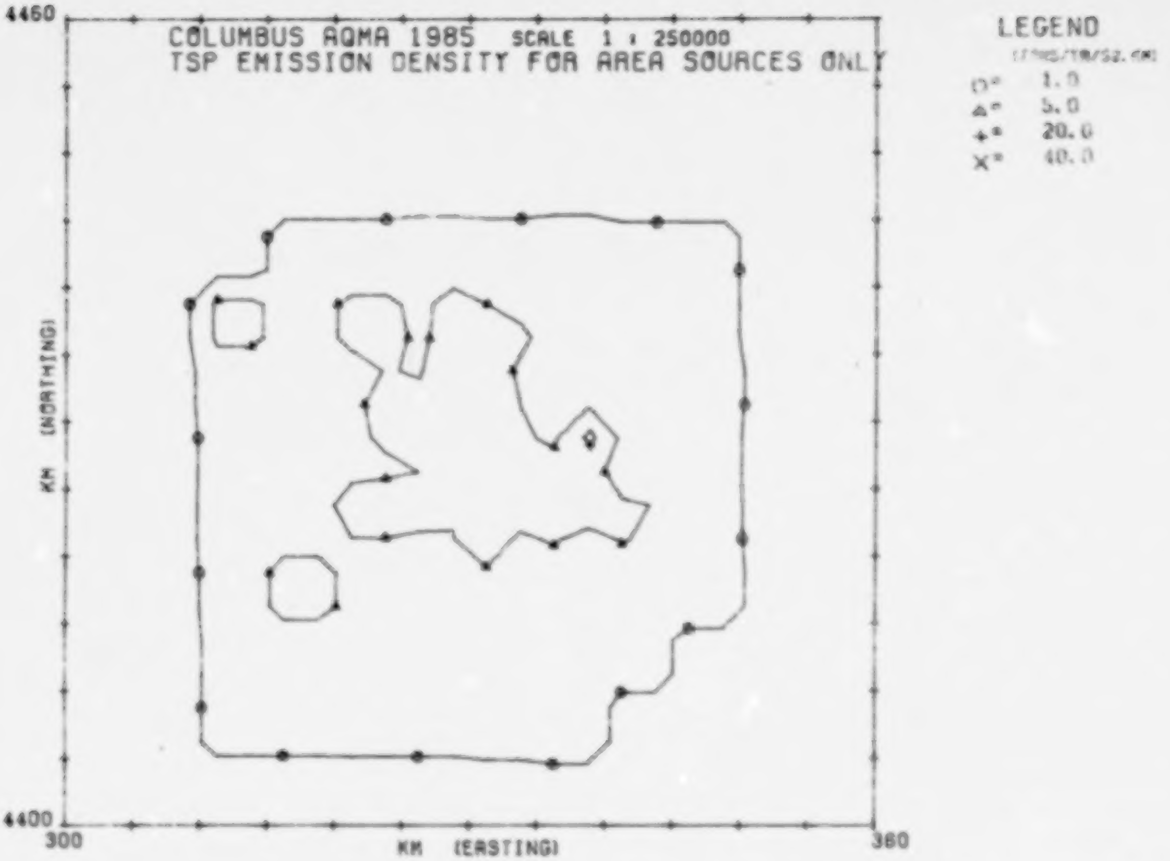

COLUMBUS AQMA 1985 SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
4460
4400
300
360
KM (EASTING)
KM (NORTHING)
LEGEND
○= 1.0
△= 5.0
+= 20.0
X= 40.0

Figure 35. Particulate emission density for the Columbus AQMA (1985)

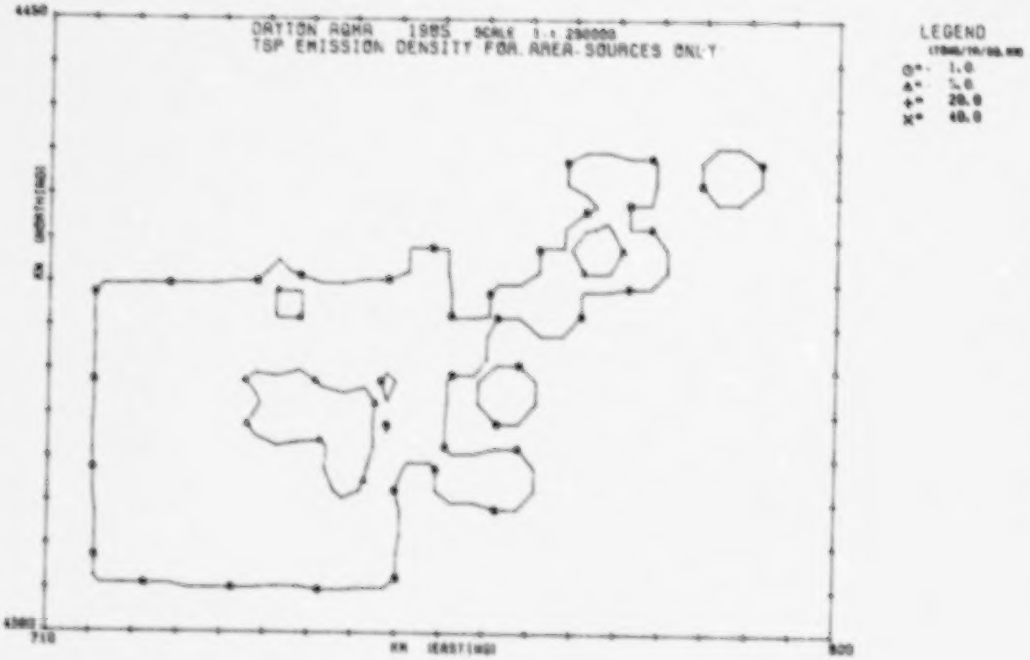

DAYTON AQMA 1985 SCALE 1: 290000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
(TONS/YR/SQ.KM)
O= 1.0
Δ= 5.0
+= 20.0
X= 40.0
4450
4380
710
800
KM (NORTHING)
KM (EASTING)

Figure 36. Particulate emission density for the Dayton AQMA (1985)

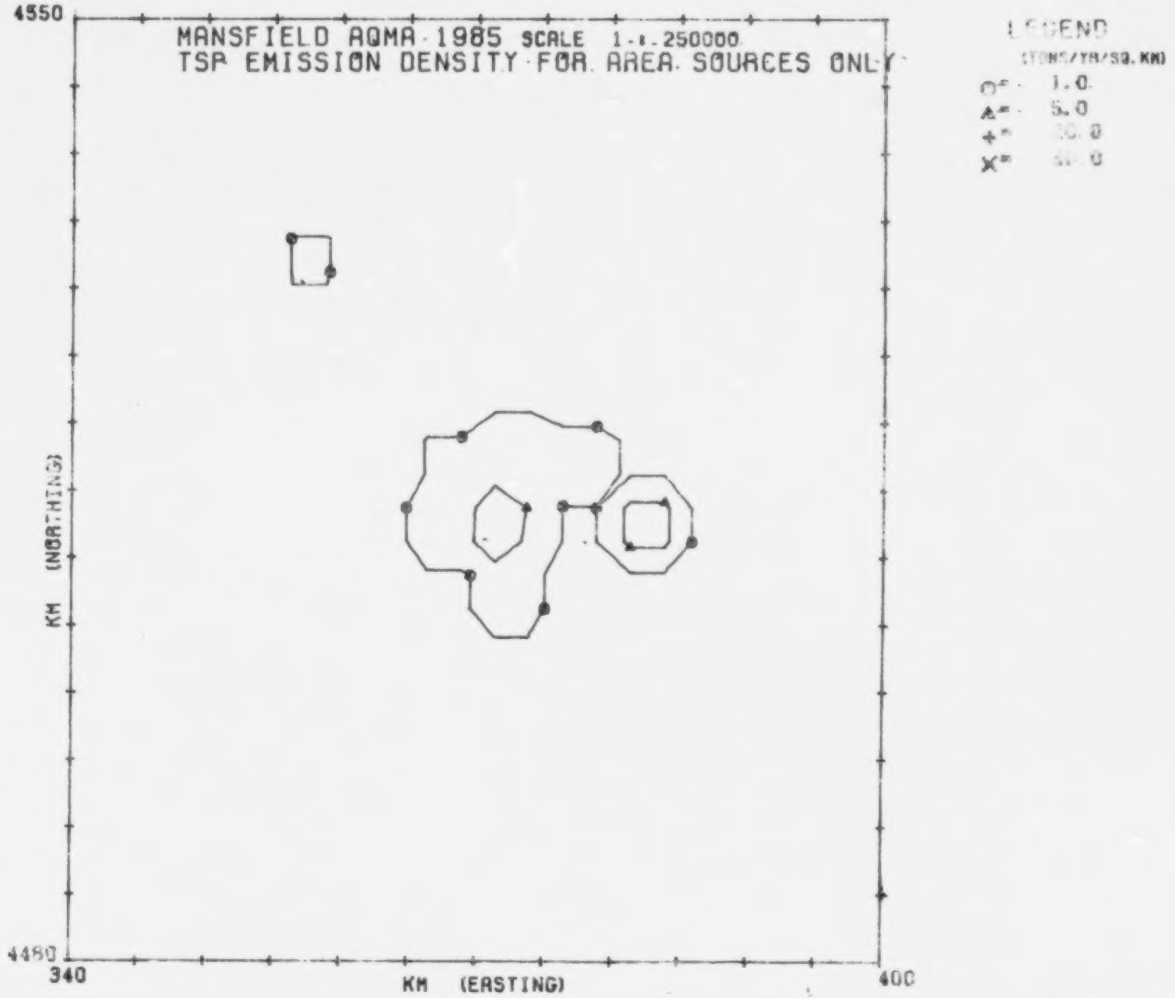

MANSFIELD AQMA 1985 SCALE 1:250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
4550
4480
340
400
KM (EASTING)
KM (NORTHING)
LEGEND
(TONS/YR/SQ.KM)
○= 1.0
△= 5.0
+=
X=

Figure 37. Particulate emission density for the Mansfield AQMA (1985)

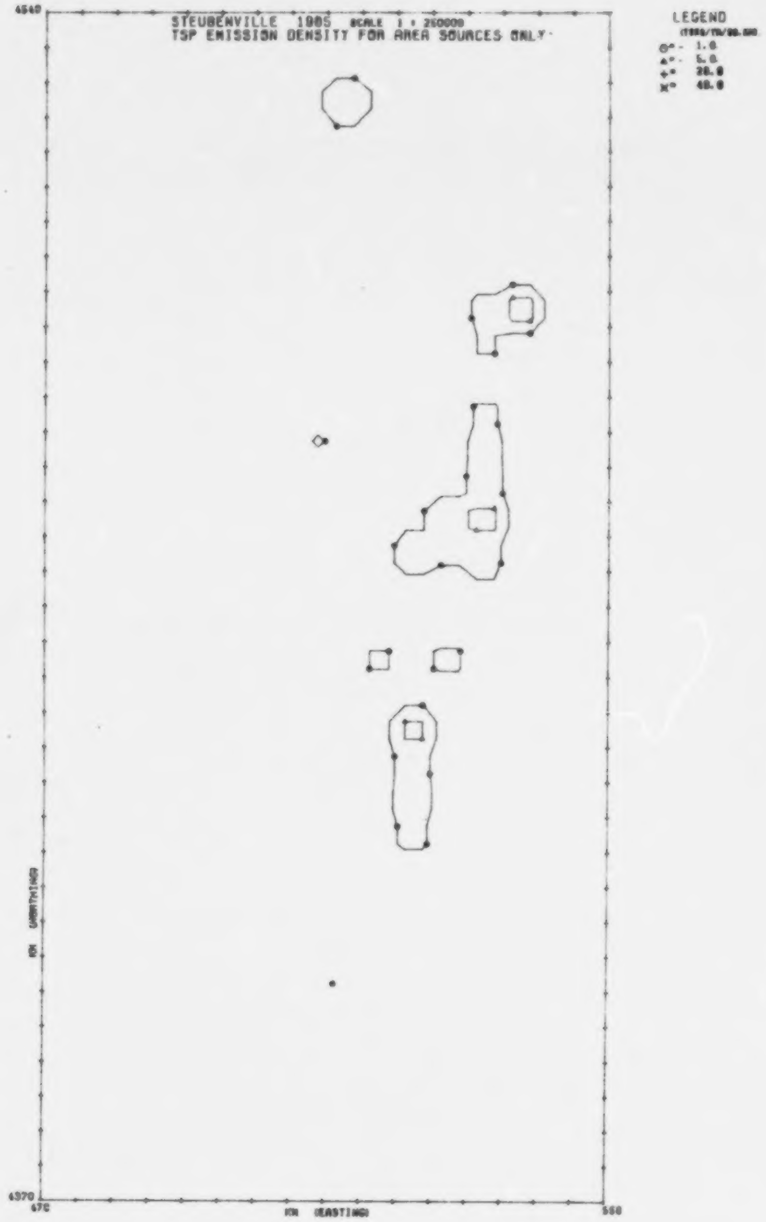

STEUBENVILLE 1985 SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
1.0
5.0
20.0
40.0
4540
4370
470
560
KM (EASTING)
KM (NORTHING)

Figure 38. Particulate emission density for the Steubenville AQMA (1985)

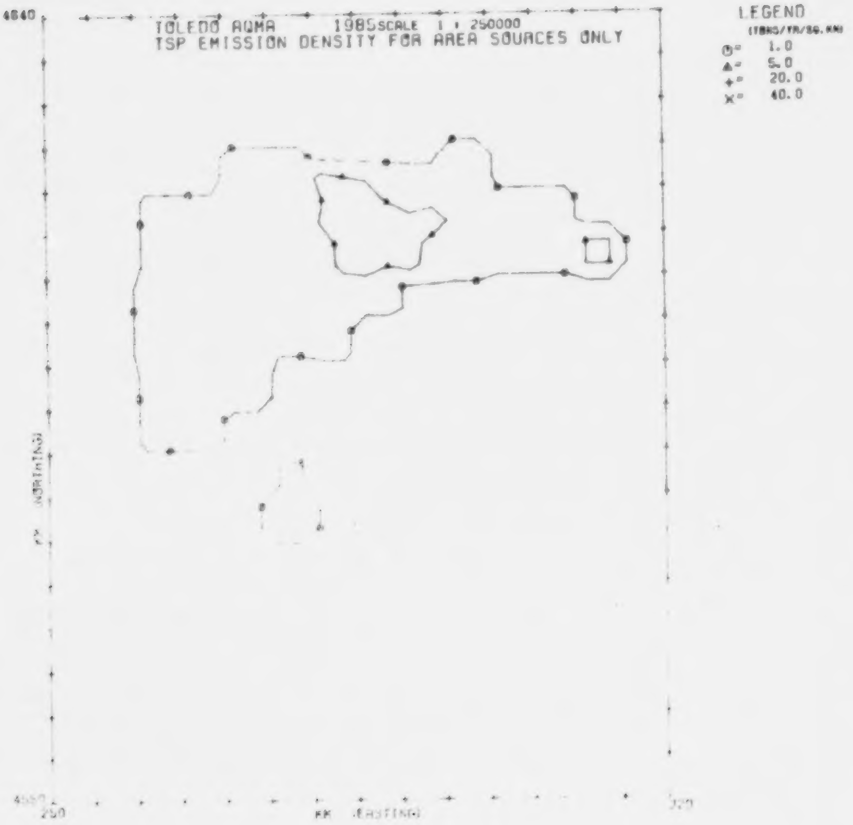
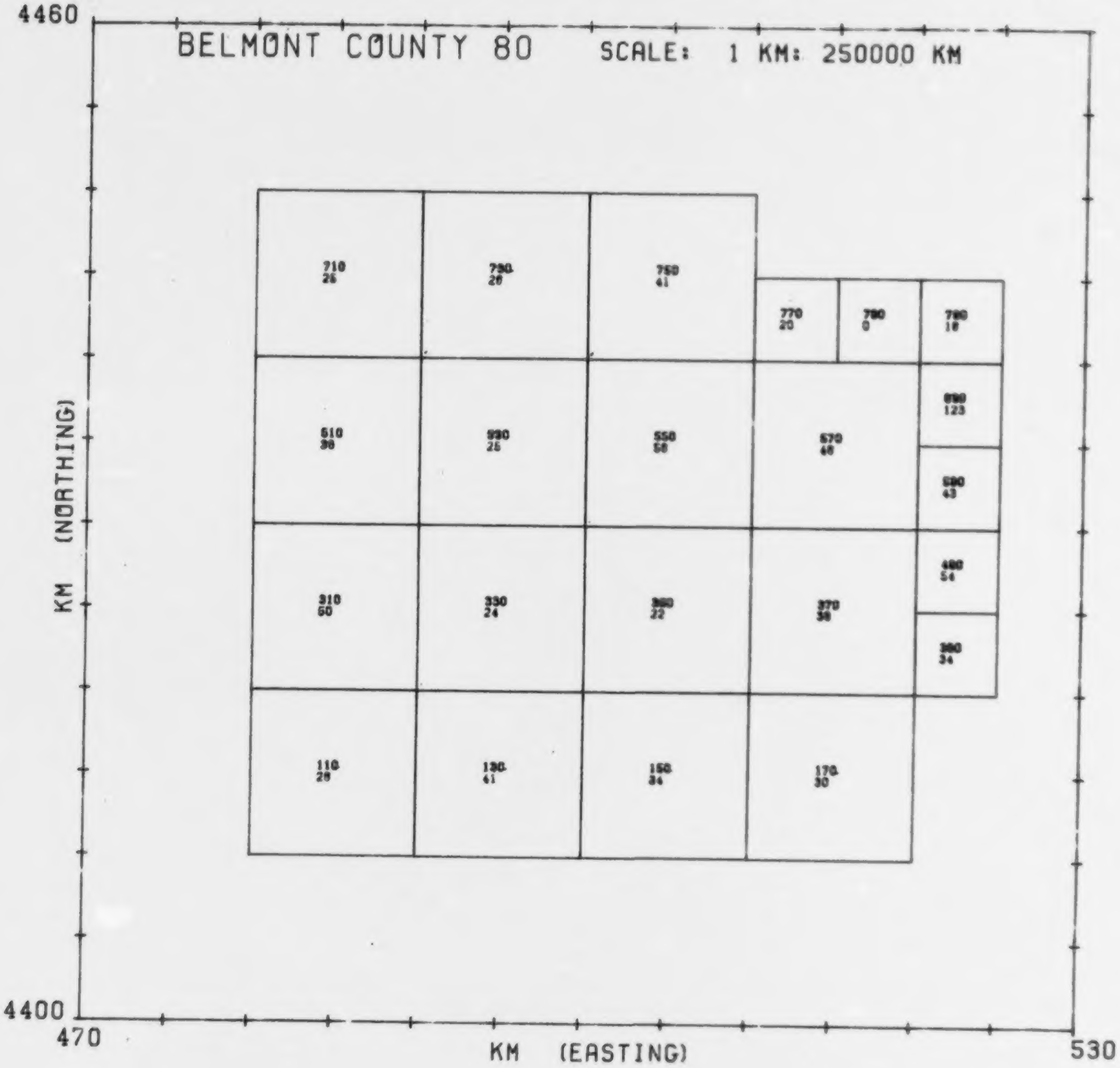

4840
TOLEDO AQMA 1985SCALE 1 : 250000
TSP EMISSION DENSITY FOR AREA SOURCES ONLY
LEGEND
(TONS/YR/SQ.KM)
○= 1.0
▲= 5.0
+= 20.0
X= 40.0
KM NORTHING
250
KM EASTING
320

Figure 39. Particulate emission density for the Toledo AQMA (1985)



4460
BELMONT COUNTY 80
SCALE: 1 KM: 250000 KM
710
26
730
28
750
41
770
20
780
0
790
18
510
38
530
25
550
58
570
48
590
123
590
43
310
50
330
24
350
22
370
38
480
54
390
34
110
28
130
41
150
34
170
30
KM (NORTHING)
4400
470
KM (EASTING)
530

Figure 40a. Particulate area grid emissions for Belmont County in 1980

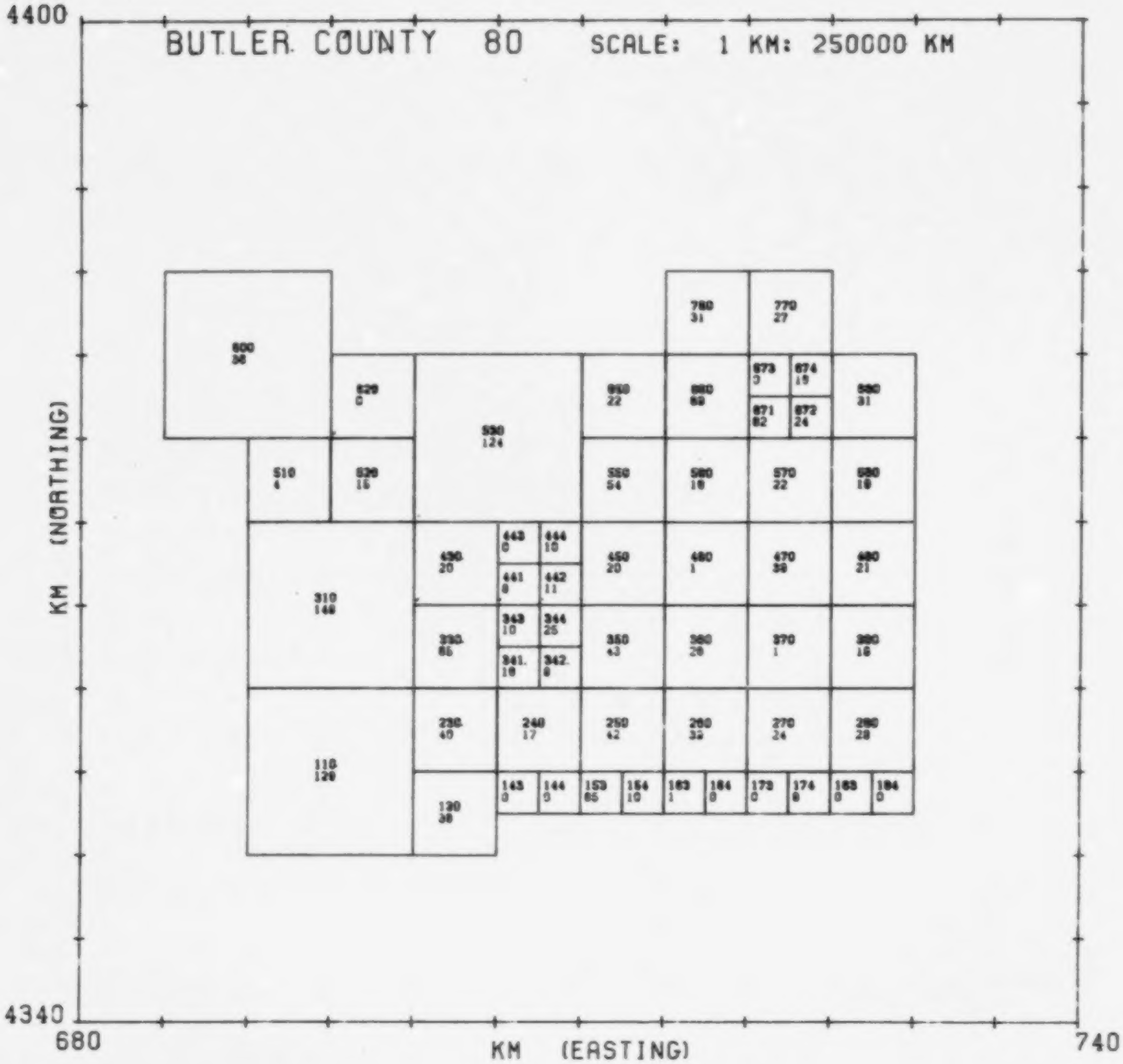

BUTLER COUNTY 80 SCALE: 1 KM: 250000 KM
4400
4340
KM (NORTHING)
680
740
KM (EASTING)
600
38
780
31
770
27
620
0
530
124
650
22
660
69
673
3
674
19
671
82
672
24
680
31
510
4
520
15
550
54
560
19
570
22
580
19
430
20
443
0
444
10
441
8
442
11
450
20
460
1
470
38
480
21
310
148
330
85
343
10
344
25
341
18
342
8
350
43
360
28
370
1
380
16
230
40
240
17
250
42
260
33
270
24
280
28
110
120
143
0
144
0
153
85
154
10
163
1
164
0
173
0
174
8
183
0
184
0
130
38

Figure 40b. Particulate area grid emissions for Butler County in 1980

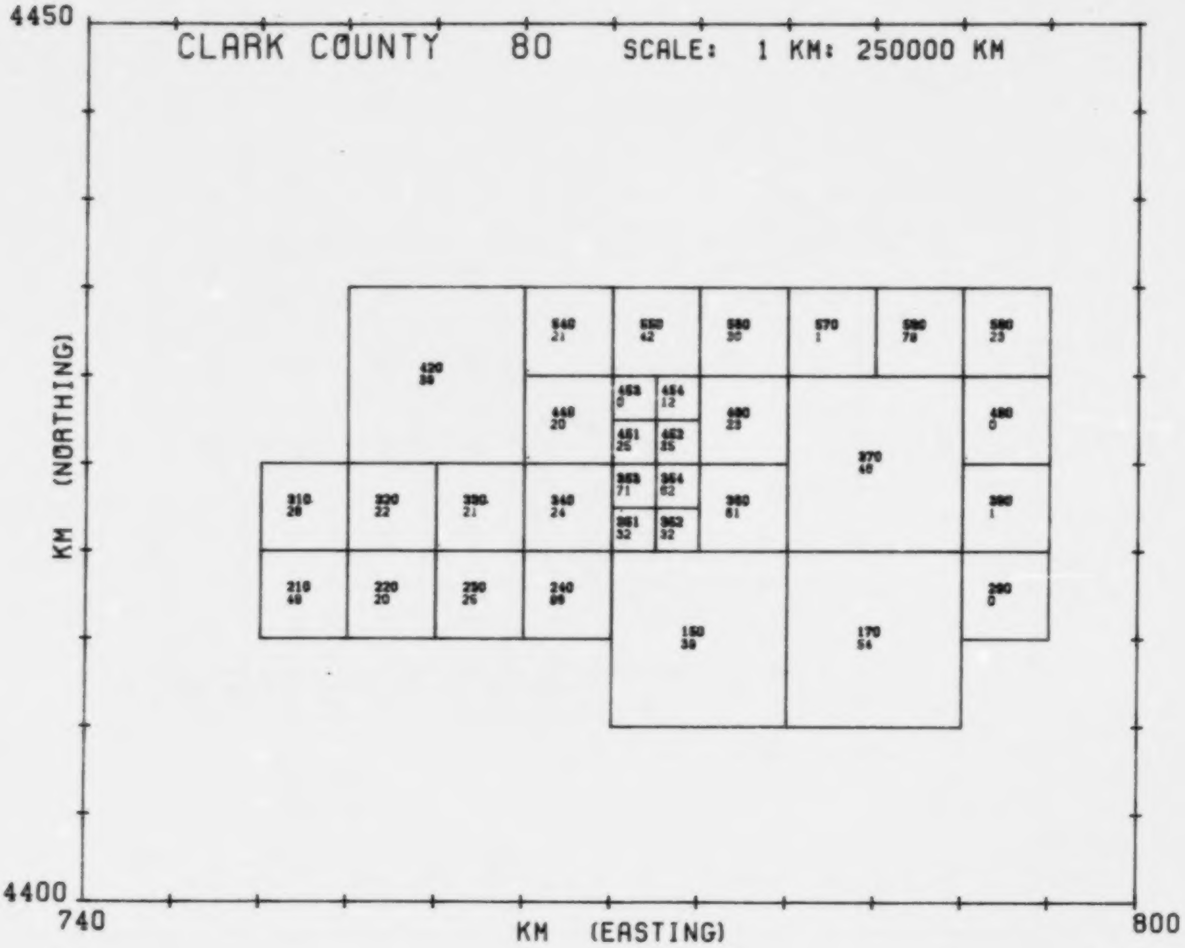

CLARK COUNTY 80
SCALE: 1 KM: 250000 KM
4450
4400
740
800
KM (NORTHING)
KM (EASTING)
420
38
540
21
550
42
560
30
570
1
580
78
590
23
440
20
453
0
454
12
451
25
452
35
460
23
370
40
490
0
310
28
320
22
330
21
340
24
353
71
354
62
351
32
352
32
360
81
390
1
210
48
220
20
230
25
240
88
150
38
170
54
290
0

Figure 40c. Particulate area grid emissions for Clark County in 1980

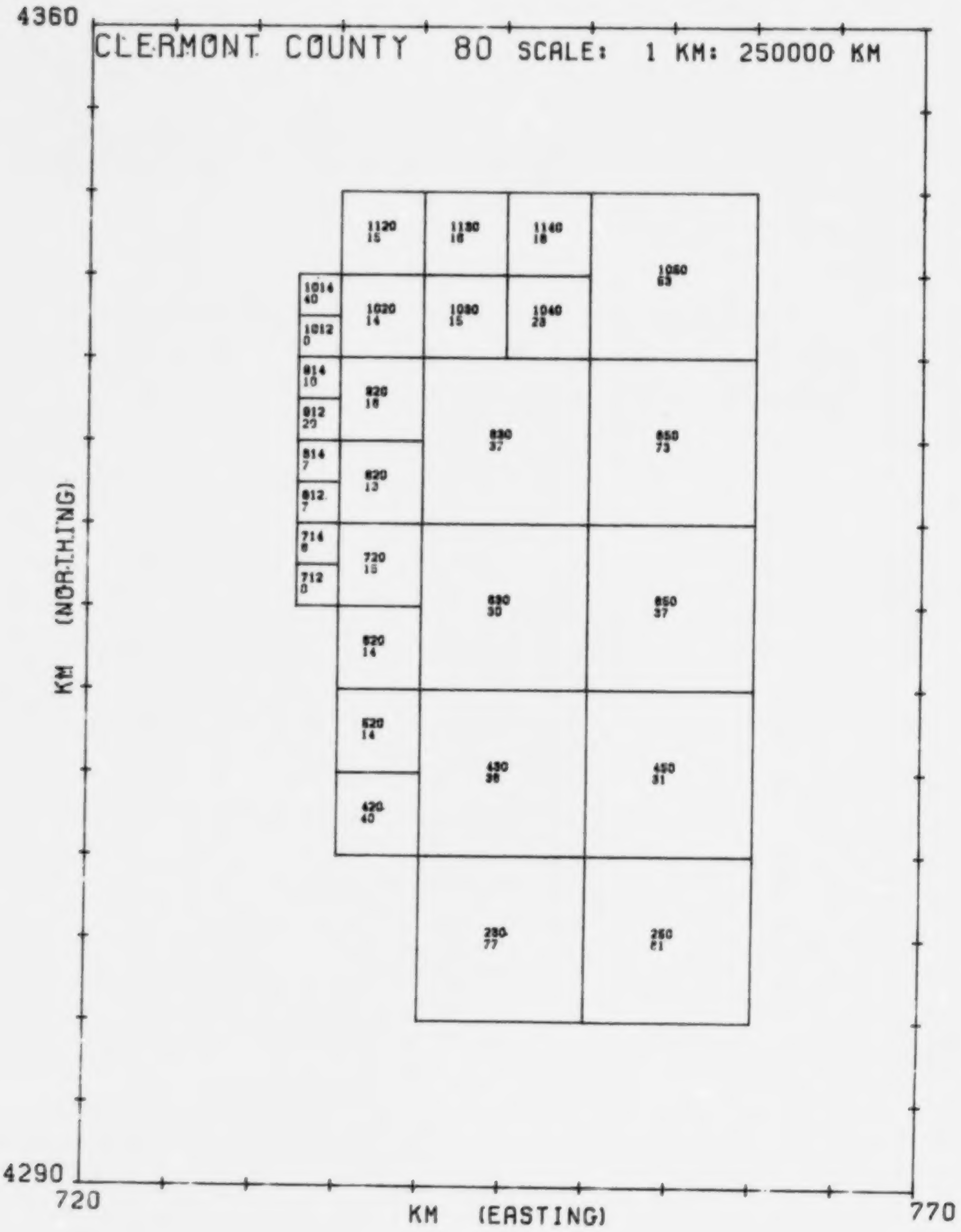

CLERMONT COUNTY 80 SCALE: 1 KM: 250000 KM
4360
4290
720
770
KM (NORTHING)
KM (EASTING)
1120
15
1130
16
1140
18
1050
63
1014
40
1012
0
1020
14
1030
15
1040
28
914
10
912
29
920
18
930
37
950
73
814
7
812
7
820
13
714
6
712
0
720
15
630
30
650
37
620
14
520
14
430
38
450
31
420
40
230
77
250
61

Figure 40d. Particulate area grid emissions for Clermont County in 1980

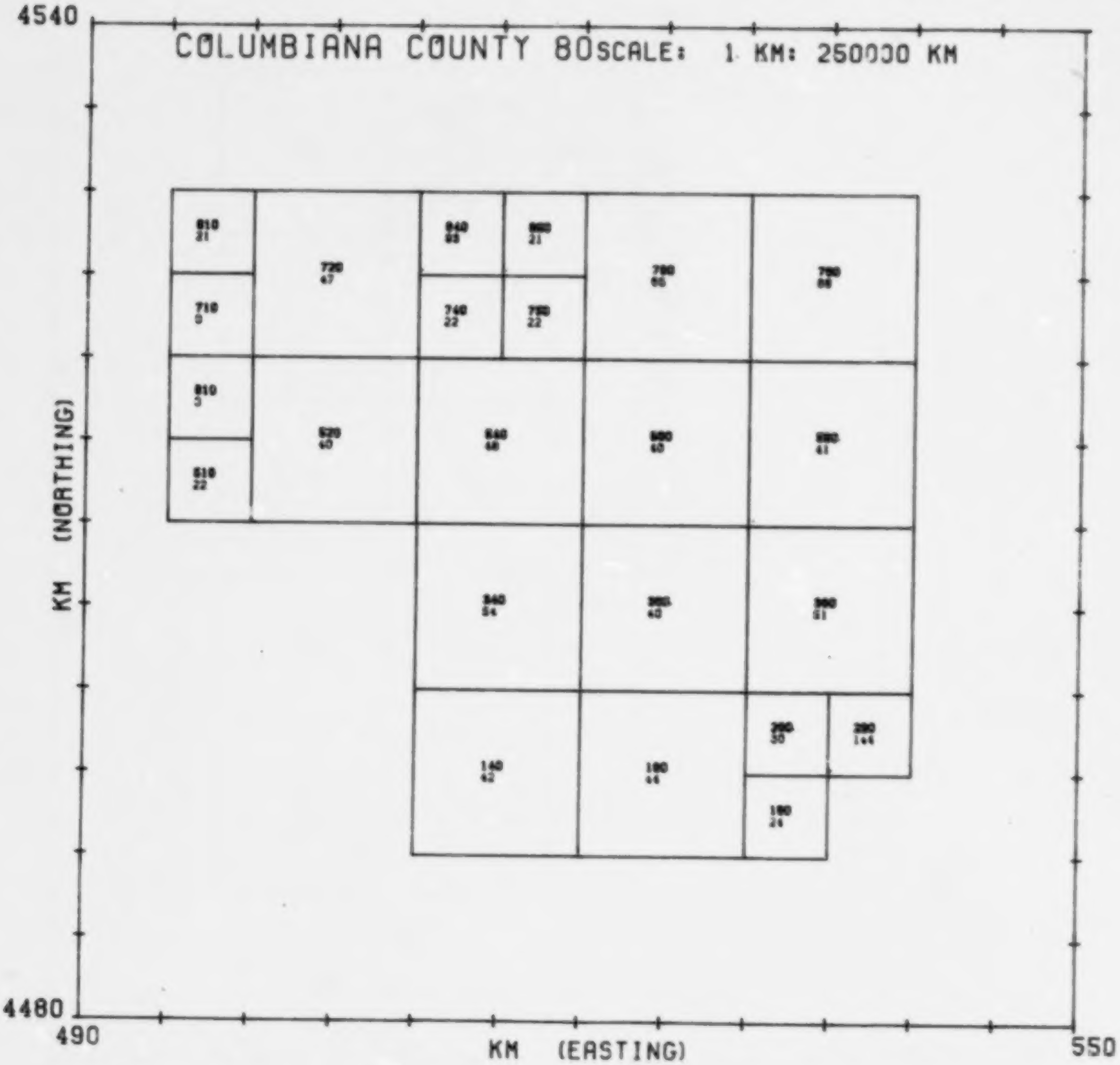

COLUMBIANA COUNTY 80SCALE: 1 KM: 250000 KM
4540
4480
490
550
KM (NORTHING)
KM (EASTING)
810
21
720
47
840
93
860
21
790
65
790
88
710
0
740
22
750
22
810
3
520
40
540
48
560
40
580
41
510
22
340
54
360
40
380
51
290
30
280
144
140
42
160
44
190
24

Figure 40c. Particulate area grid emissions for Columbiana County in 1980

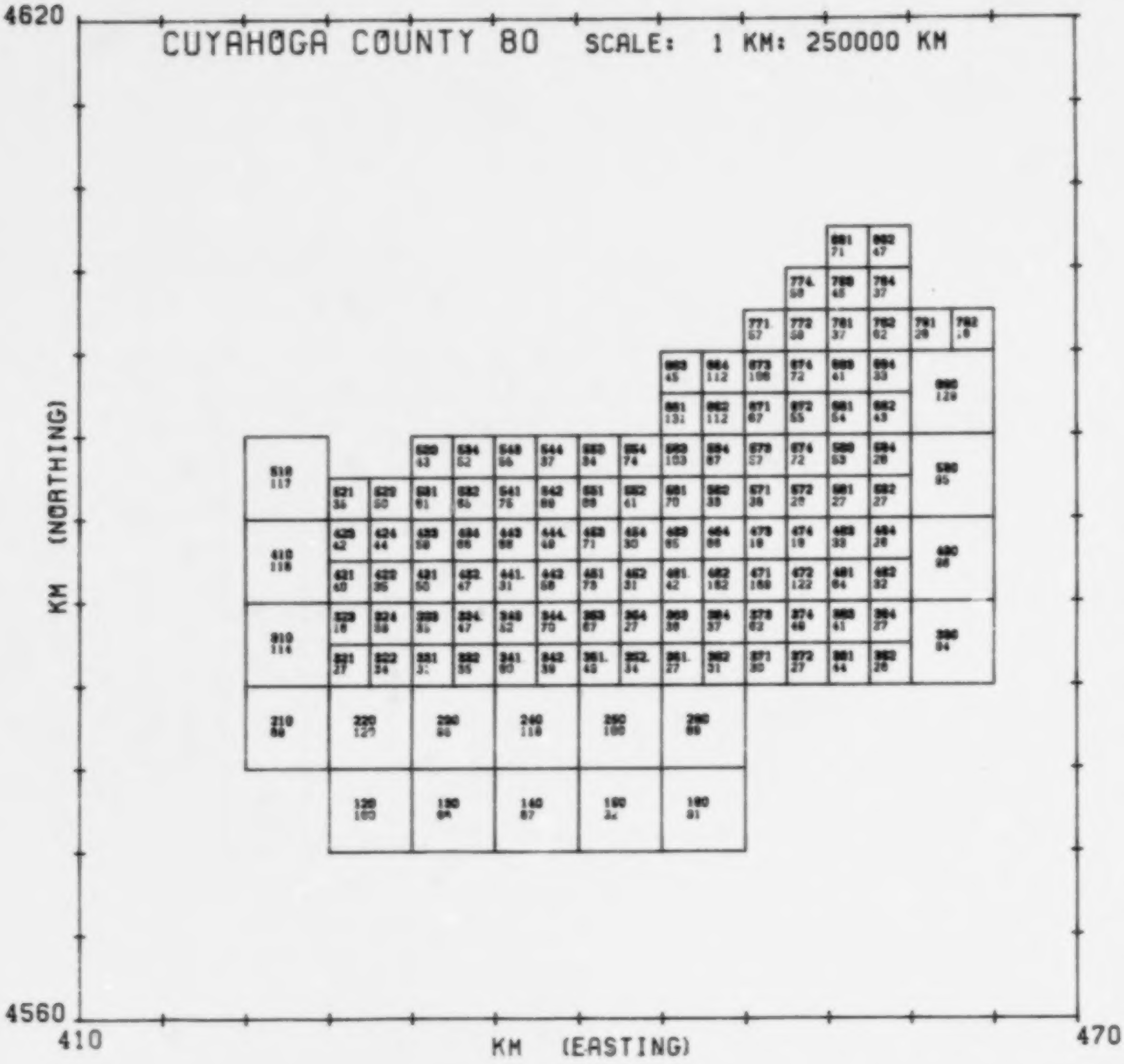

CUYAHOGA COUNTY 80 SCALE: 1 KM: 250000 KM
4620
4560
410
470
KM (NORTHING)
KM (EASTING)

Figure 40f. Particulate area grid emissions for Cuyahoga County in 1980

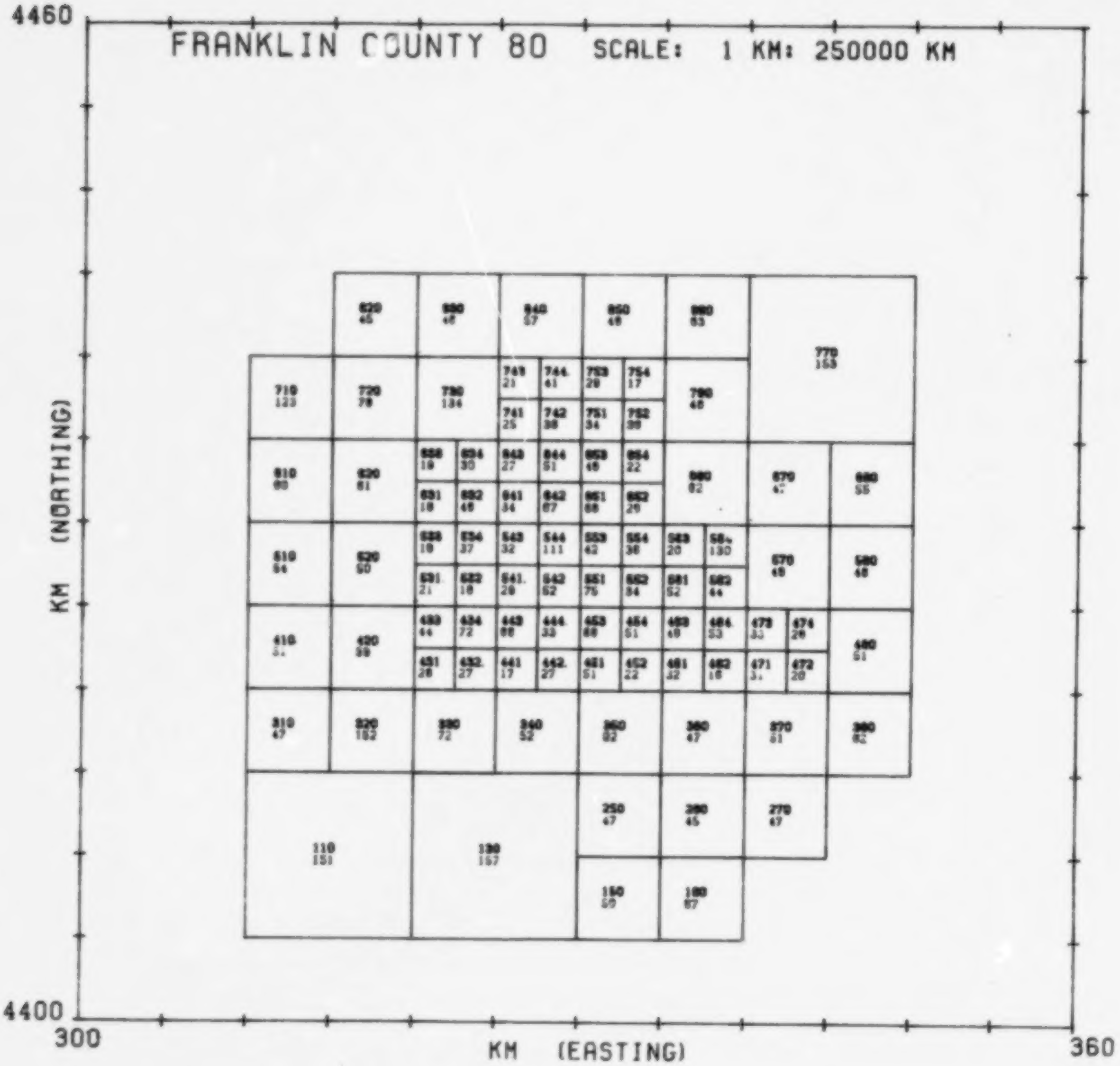

FRANKLIN COUNTY 80 SCALE: 1 KM: 250000 KM
4460
4400
300
360
KM (NORTHING)
KM (EASTING)
820 45
830 48
840 57
850 49
860 63
770 153
710 123
720 79
730 134
743 21
744 41
753 29
754 17
741 25
742 38
751 34
752 39
760 48
610 80
620 61
633 19
634 30
643 27
644 51
653 49
654 22
660 82
670 47
680 55
631 18
632 48
641 34
642 67
651 68
652 29
510 94
520 50
533 19
534 37
543 32
544 111
553 42
554 38
563 20
564 130
570 49
580 48
531 21
532 18
541 28
542 62
551 75
552 34
561 52
562 44
410 3.
420 39
433 44
434 72
443 88
444 33
453 88
454 51
463 49
464 53
473 33
474 29
480 51
431 28
432 27
441 17
442 27
451 51
452 22
461 32
462 18
471 3.
472 20
310 47
320 182
330 72
340 52
350 82
360 47
370 81
380 82
250 47
260 45
270 67
110 151
130 157
150 59
160 67

Figure 40g. Particulate area grid emissions for Franklin County in 1980

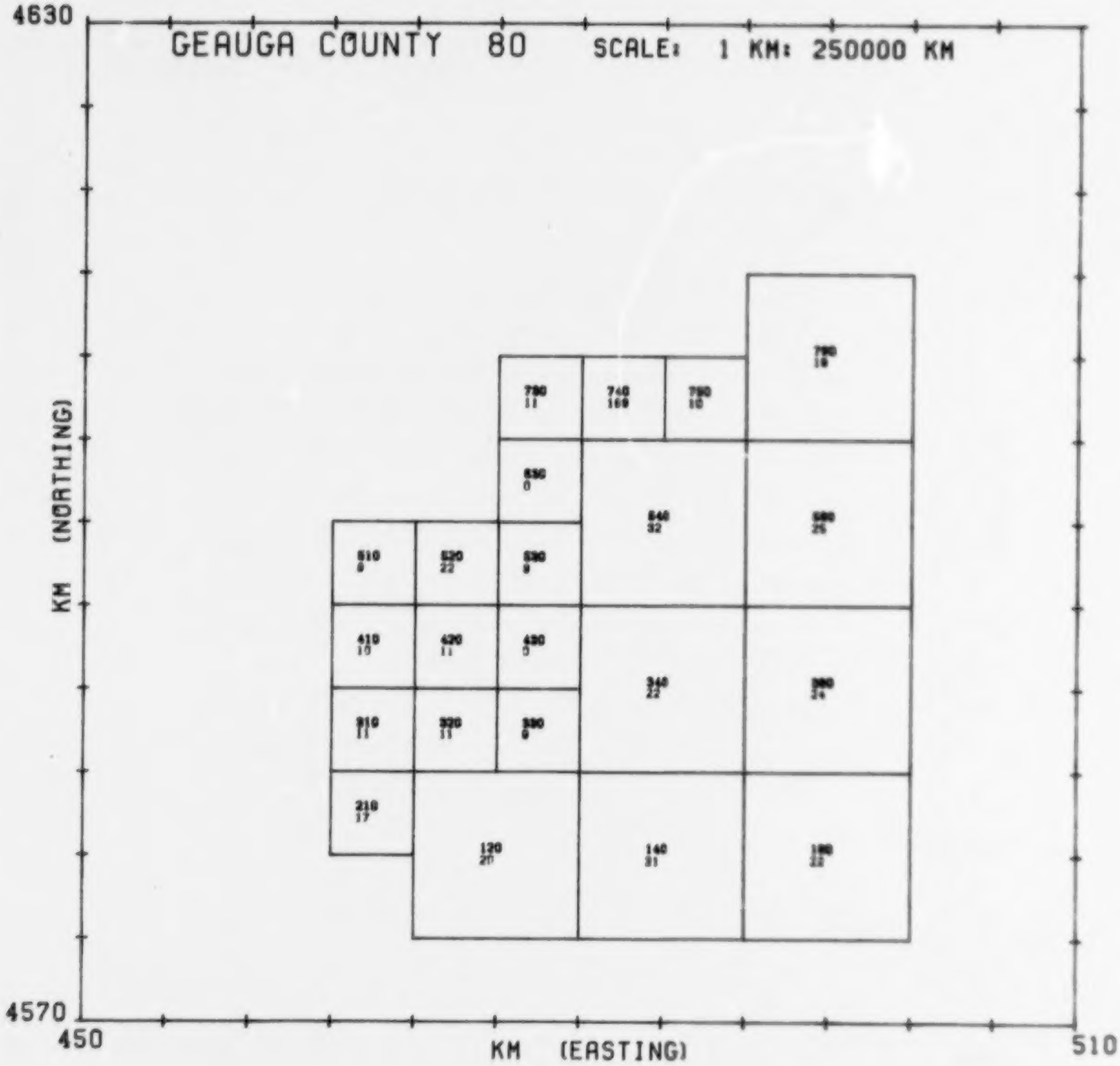

GEAUGA COUNTY 80
SCALE: 1 KM: 250000 KM
4630
4570
450
510
KM (NORTHING)
KM (EASTING)
730
11
740
169
750
10
760
19
630
0
640
32
660
25
510
8
520
22
530
9
410
10
420
11
430
0
340
22
360
24
310
11
320
11
330
9
210
17
120
20
140
21
160
22

Figure 40h. Particulate area grid emissions for Geauga County in 1980

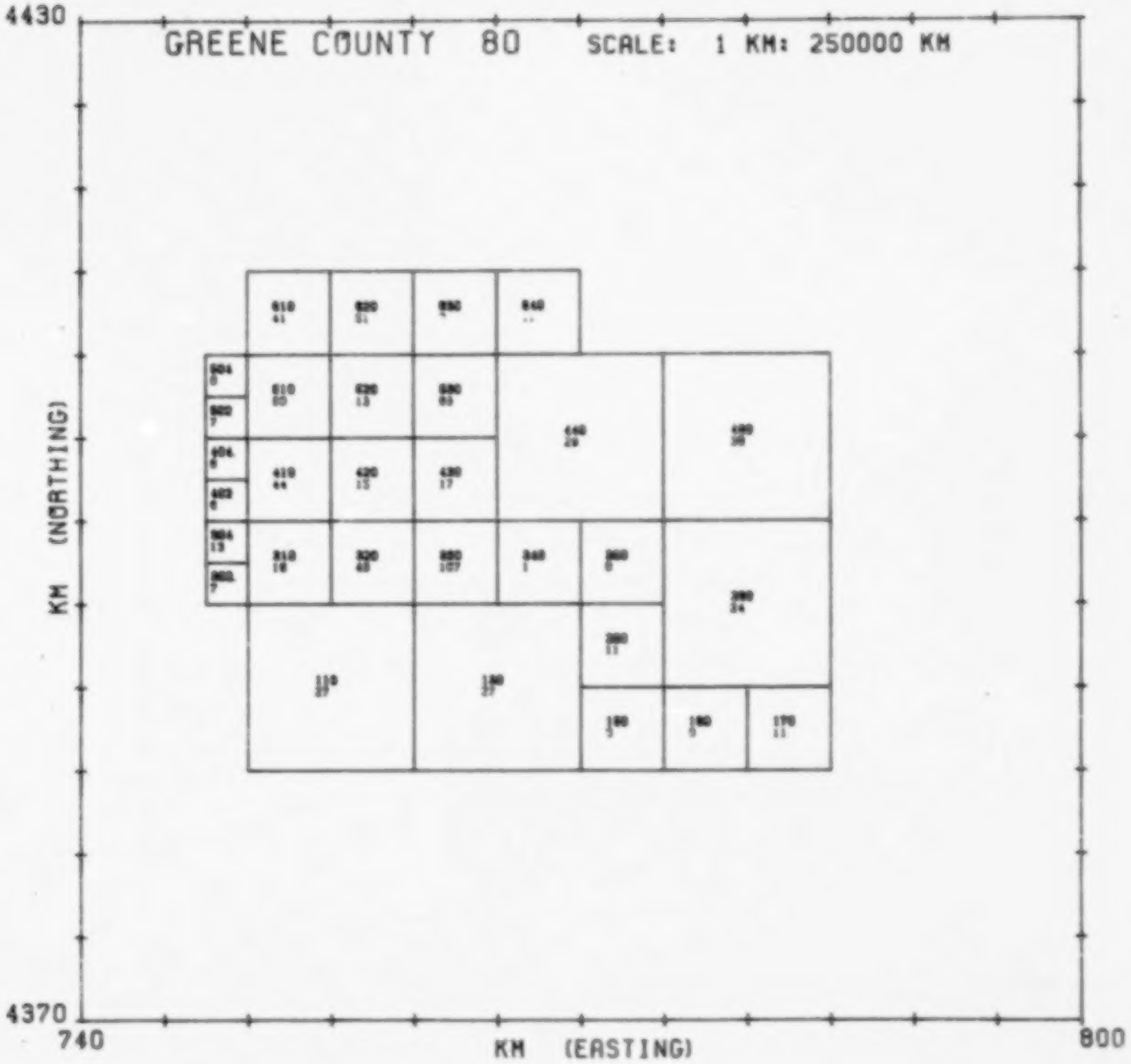

4430
GREENE COUNTY 80
SCALE: 1 KM: 250000 KM
KM (NORTHING)
4370
740
KM (EASTING)
800

Figure 401. Particulate area grid emissions for Greene County in 1980

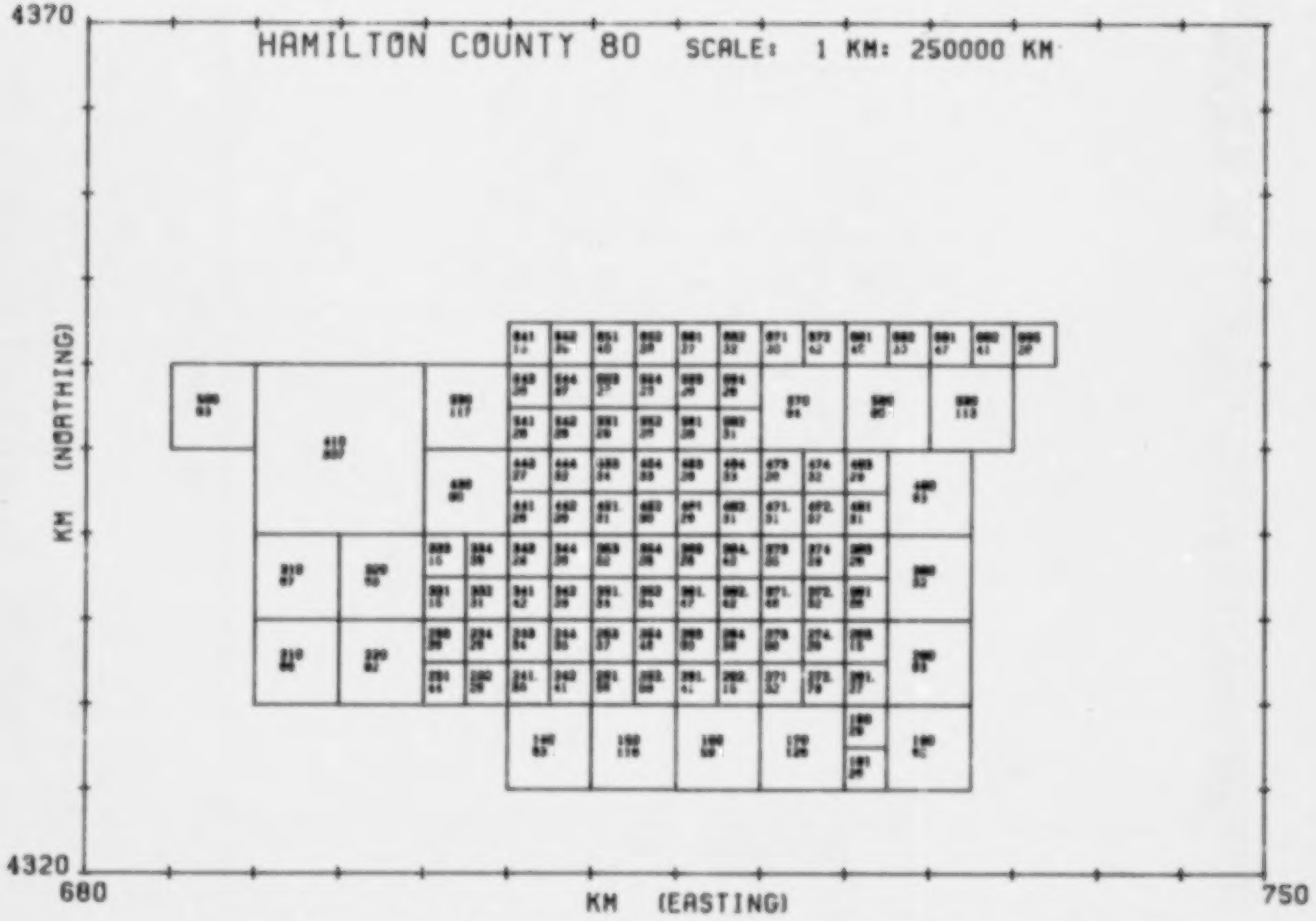

HAMILTON COUNTY 80 SCALE: 1 KM: 250000 KM
4370
4320
680
750
KM (NORTHING)
KM (EASTING)

Figure 40j. Particulate area grid emissions for Hamilton County in 1980

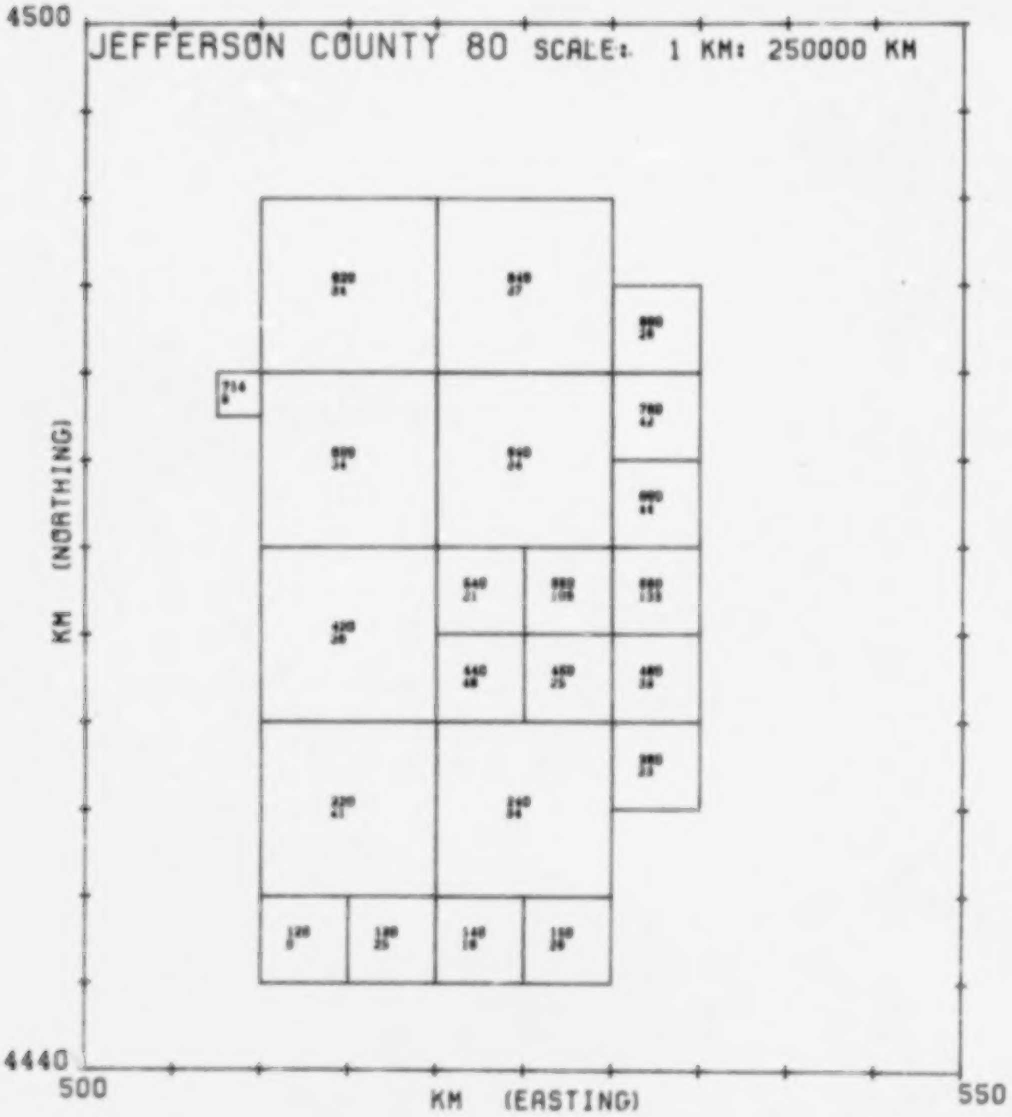

JEFFERSON COUNTY 80 SCALE: 1 KM: 250000 KM
4500
4440
500
550
KM (NORTHING)
KM (EASTING)
714

Figure 40k. Particulate area grid emissions for Jefferson County in 1980

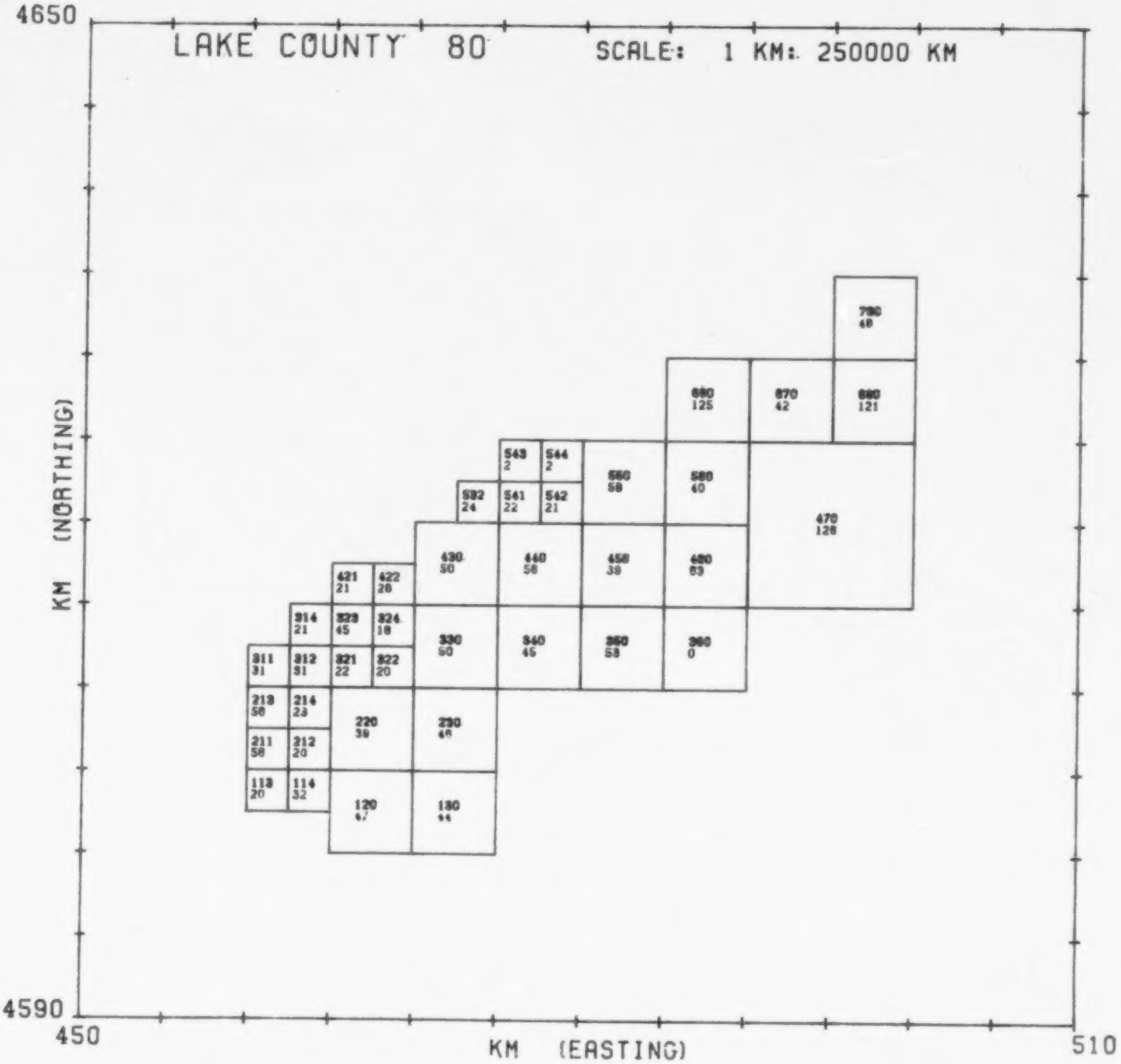

LAKE COUNTY 80
SCALE: 1 KM: 250000 KM
4650
4590
450
510
KM (NORTHING)
KM (EASTING)
780 40
660 125
670 42
680 121
543 2
544 2
550 58
560 40
532 24
541 22
542 21
470 128
421 21
422 20
430 50
440 58
450 38
460 83
314 21
323 45
324 18
330 60
340 45
350 58
360 0
311 31
312 31
321 22
322 20
213 50
214 23
220 38
230 48
211 58
212 20
113 20
114 32
120 47
130 44

Figure 40ℓ. Particulate area grid emissions for Lake County in 1980

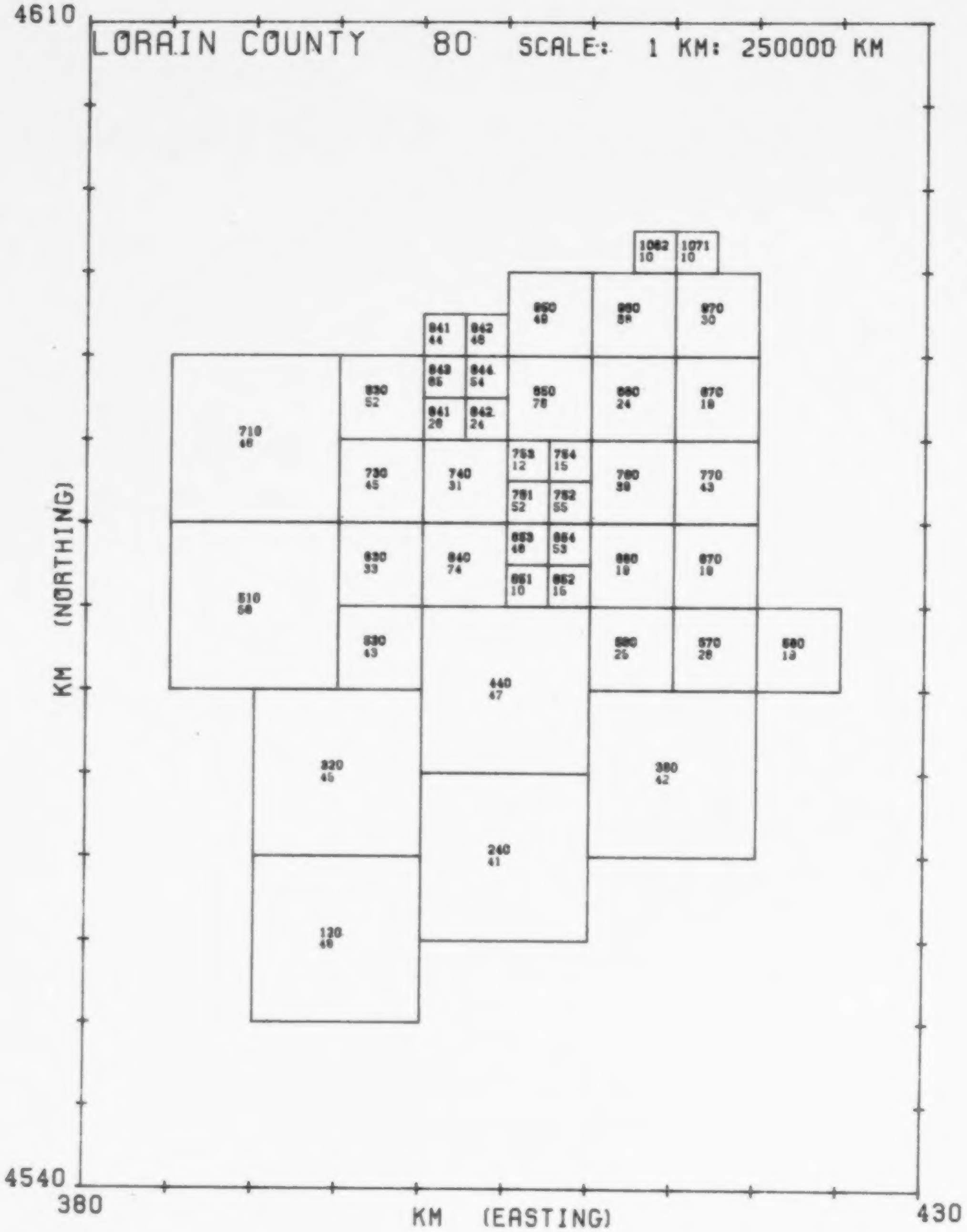

LORAIN COUNTY 80 SCALE: 1 KM: 250000 KM
4610
4540
380
430
KM (NORTHING)
KM (EASTING)
1062 10
1071 10
941 44
942 48
950 49
960 58
970 30
830 52
843 65
844. 54
841 20
842. 24
850 78
860 24
870 18
710 48
730 45
740 31
753 12
754 15
751 52
752 55
760 38
770 43
510 58
630 33
640 74
653 48
654 53
651 10
652 16
660 18
670 18
530 43
440 47
560 26
570 28
580 13
320 45
380 42
240 41
120 48

Figure 40m. Particulate area grid emissions for Lorain County in 1980

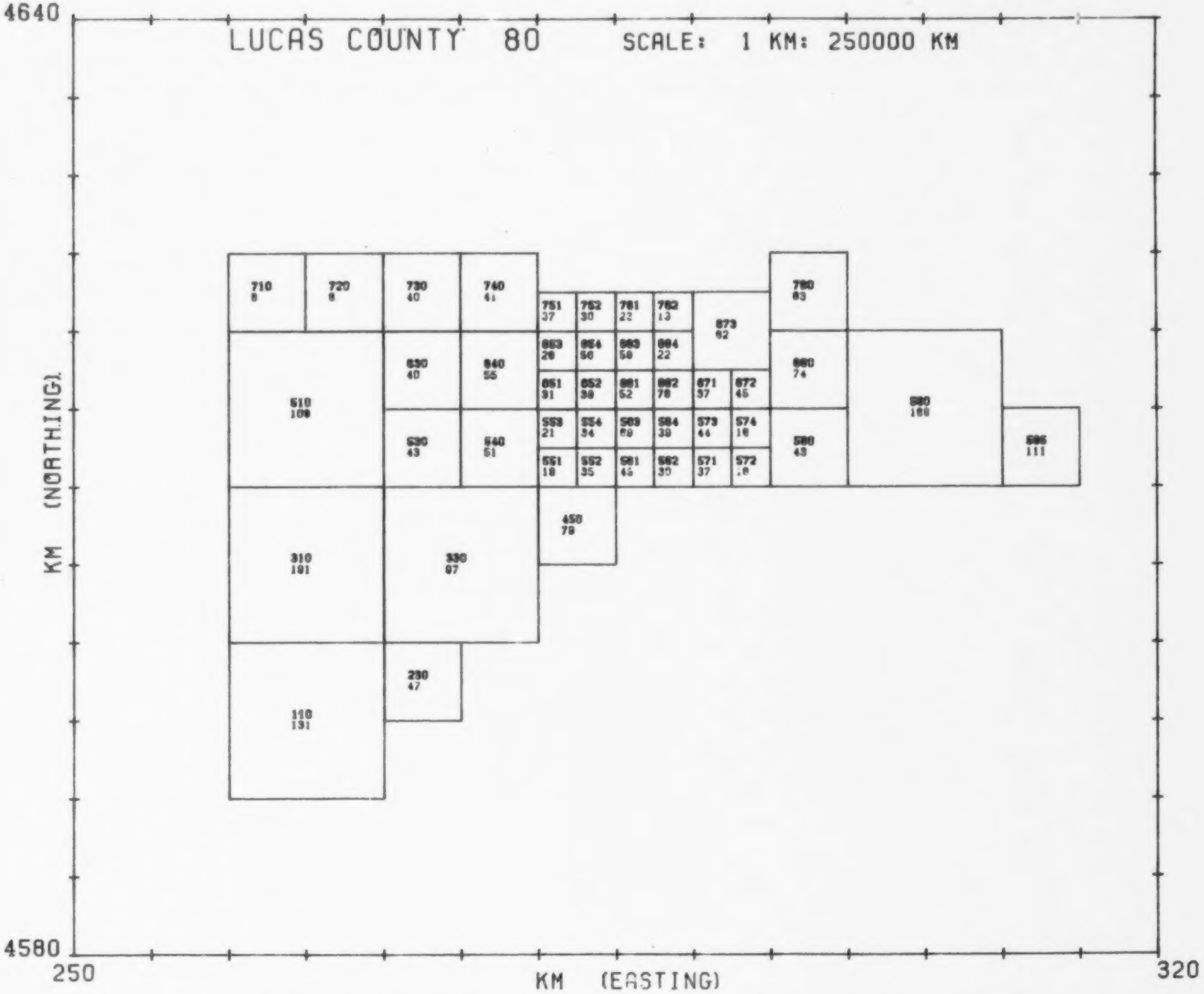

LUCAS COUNTY 80
SCALE: 1 KM: 250000 KM
4640
4580
250
320
KM (NORTHING)
KM (EASTING)
710 8
720 8
730 40
740 41
751 37
752 30
761 22
762 13
873 62
780 83
610 108
630 40
640 55
653 28
654 56
663 58
664 22
651 31
652 38
661 52
662 78
671 37
672 45
680 74
590 186
530 43
540 51
553 21
554 34
563 69
564 38
573 44
574 18
580 43
596 111
551 18
552 35
561 45
562 30
571 37
572 18
450 79
310 101
330 87
230 47
110 131

Figure 40n. Particulate area grid emissions for Lucas County in 1980

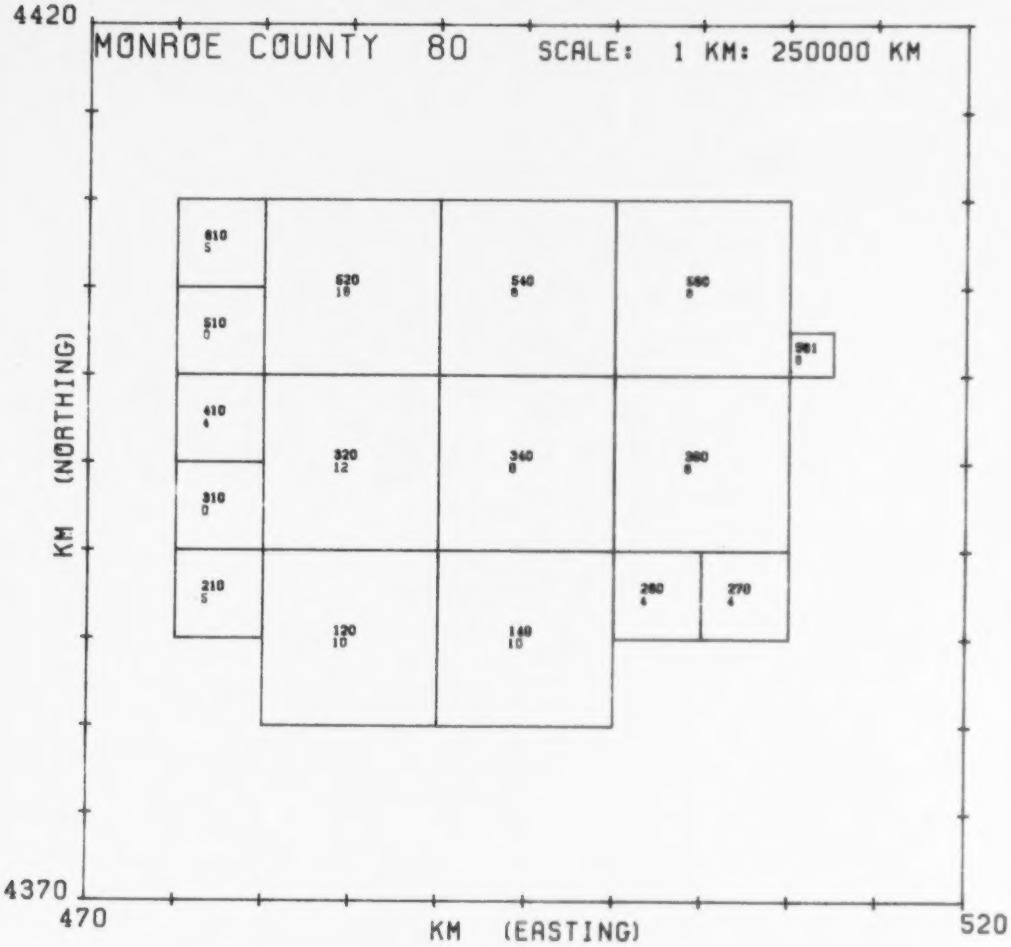

MONROE COUNTY 80
SCALE: 1 KM: 250000 KM
4420
4370
470
520
KM (NORTHING)
KM (EASTING)
610
5
520
18
540
8
560
8
510
0
581
8
410
4
320
12
340
8
360
8
310
0
210
5
260
4
270
4
120
10
140
10

Figure 40o. Particulate area grid emissions for Monroe County in 1980

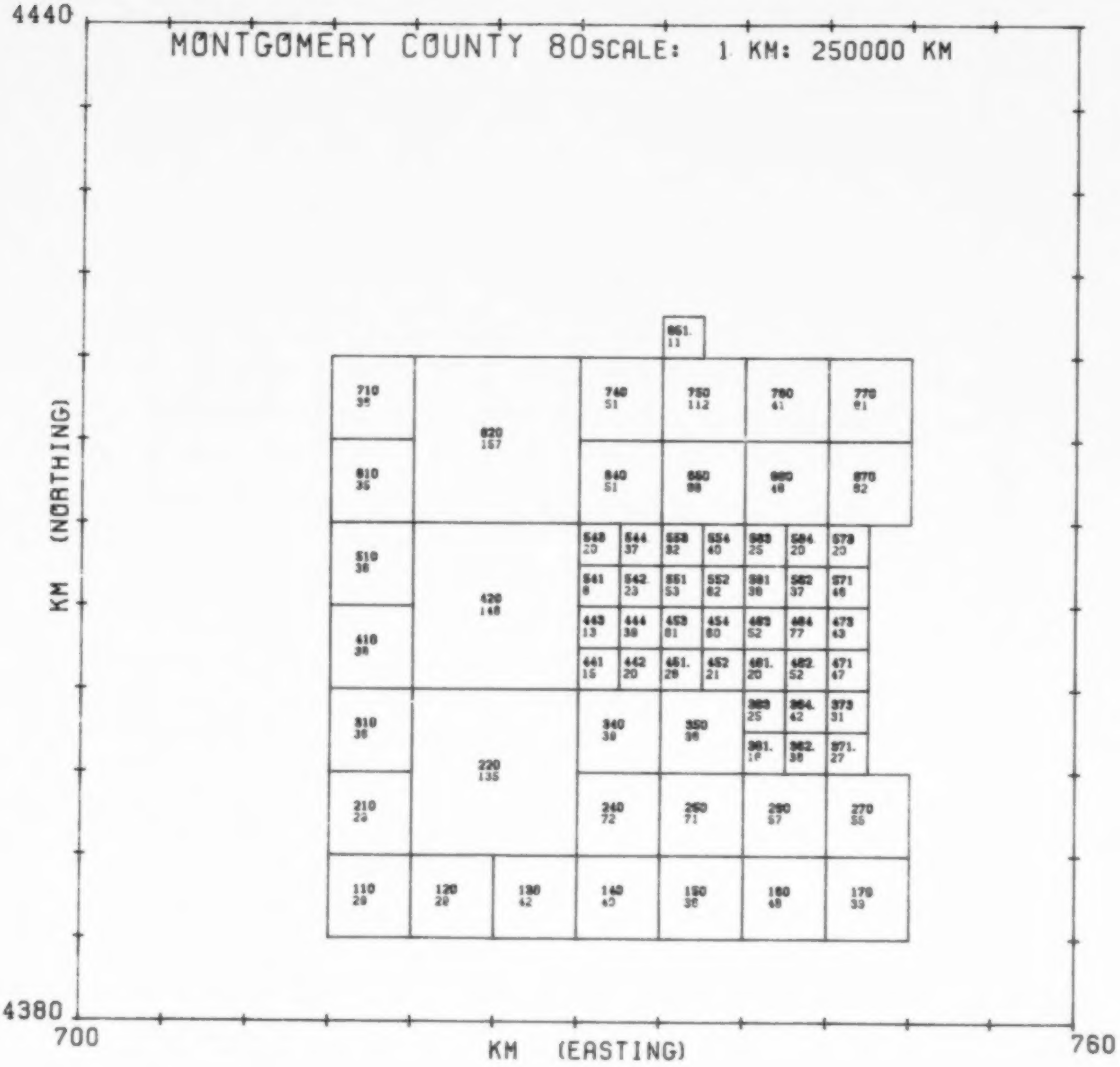

MONTGOMERY COUNTY 80SCALE: 1 KM: 250000 KM
4440
4380
700
760
KM (NORTHING)
KM (EASTING)
861. 11
710 35
620 157
740 51
750 112
760 41
770 81
610 35
840 51
850 88
860 48
870 82
510 38
543 20
544 37
553 82
554 40
563 25
564. 20
573 20
541 8
542. 23
551 53
552 82
561 38
562 37
571 48
420 148
410 38
443 13
444 38
453 81
454 80
463 52
464 77
473 43
441 15
442 20
451. 28
452 21
461. 20
462. 52
471 47
310 38
340 38
350 38
363 25
364. 42
373 31
361. 18
362. 38
371. 27
220 135
210 28
240 72
250 71
260 57
270 56
110 28
120 28
130 42
140 40
150 38
160 48
170 33

Figure 40p. Particulate area grid emissions for Montgomery County in 1980

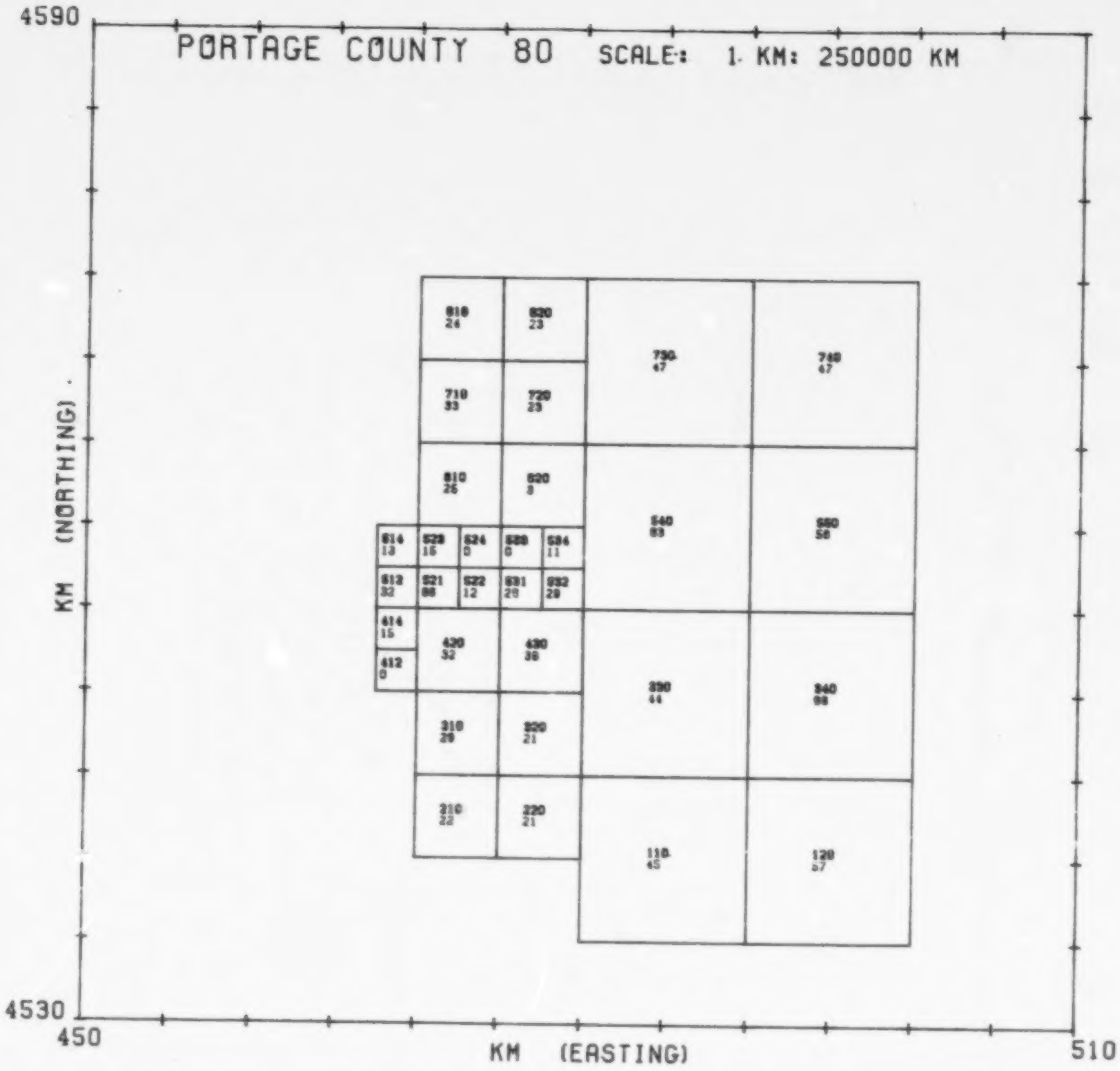

PORTAGE COUNTY 80 SCALE: 1 KM: 250000 KM
4590
4530
450
510
KM (NORTHING)
KM (EASTING)
810 24
820 23
730 47
740 47
710 33
720 23
610 26
620 3
540 83
560 56
614 13
523 15
524 0
528 0
534 11
512 32
521 88
522 12
531 29
532 29
414 15
412 0
420 32
430 38
330 44
340 88
310 29
320 21
210 22
220 21
110 45
120 57

Figure 40q. Particulate area grid emissions for Portage County in 1980

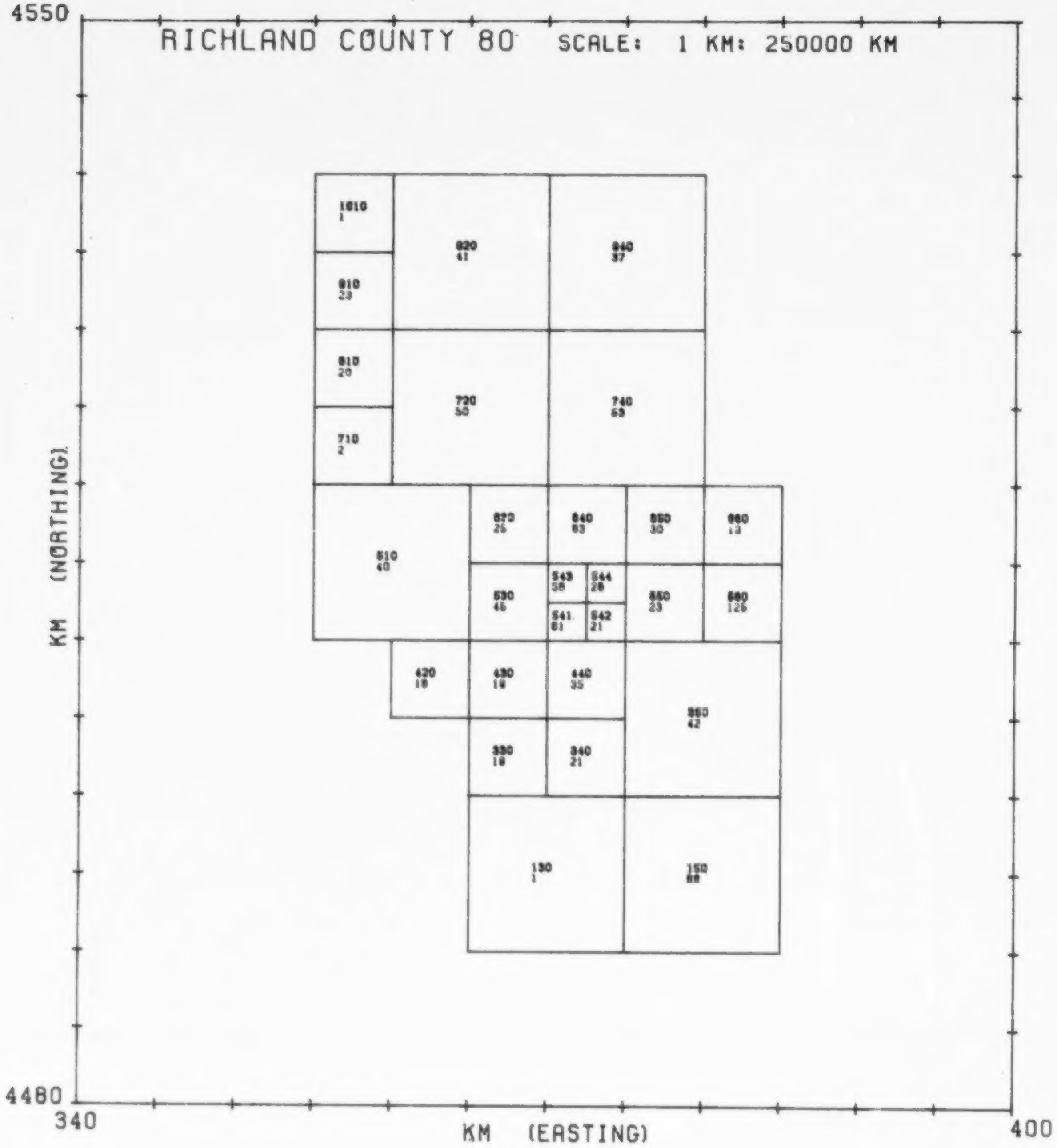

RICHLAND COUNTY 80 SCALE: 1 KM: 250000 KM
4550
4480
340
400
KM (NORTHING)
KM (EASTING)
1010
1
820
41
840
37
910
23
810
20
720
50
740
63
710
2
510
40
620
25
640
83
660
30
680
13
530
45
543
58
544
28
541
81
542
21
560
23
580
126
420
18
430
19
440
35
350
42
330
19
340
21
130
1
150
88

Figure 40r. Particulate area grid emissions for Richland County in 1980

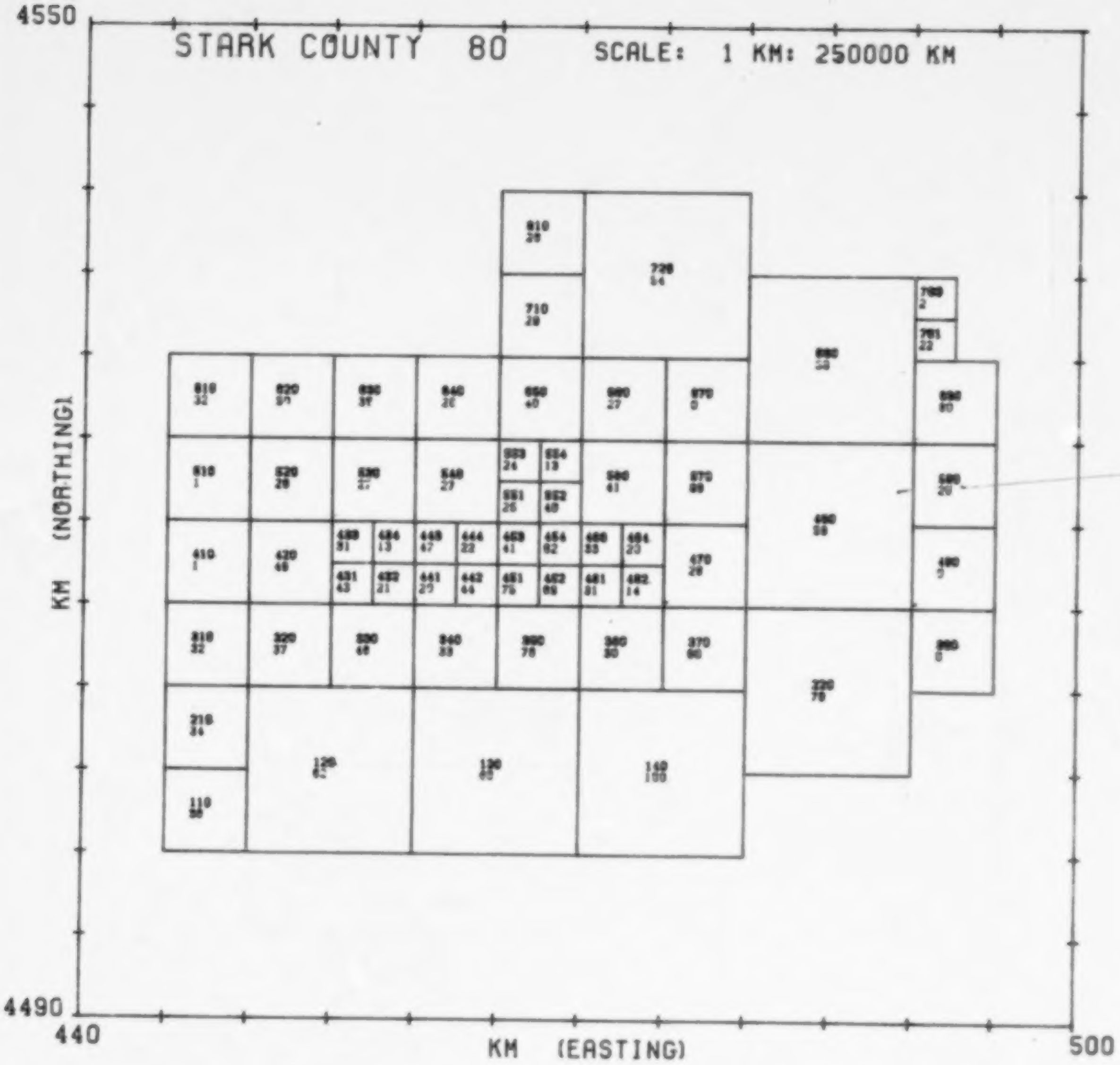

STARK COUNTY 80
SCALE: 1 KM: 250000 KM
4550
4490
440
500
KM (NORTHING)
KM (EASTING)

Figure 40s. Particulate area grid emissions for Stark County in 1980

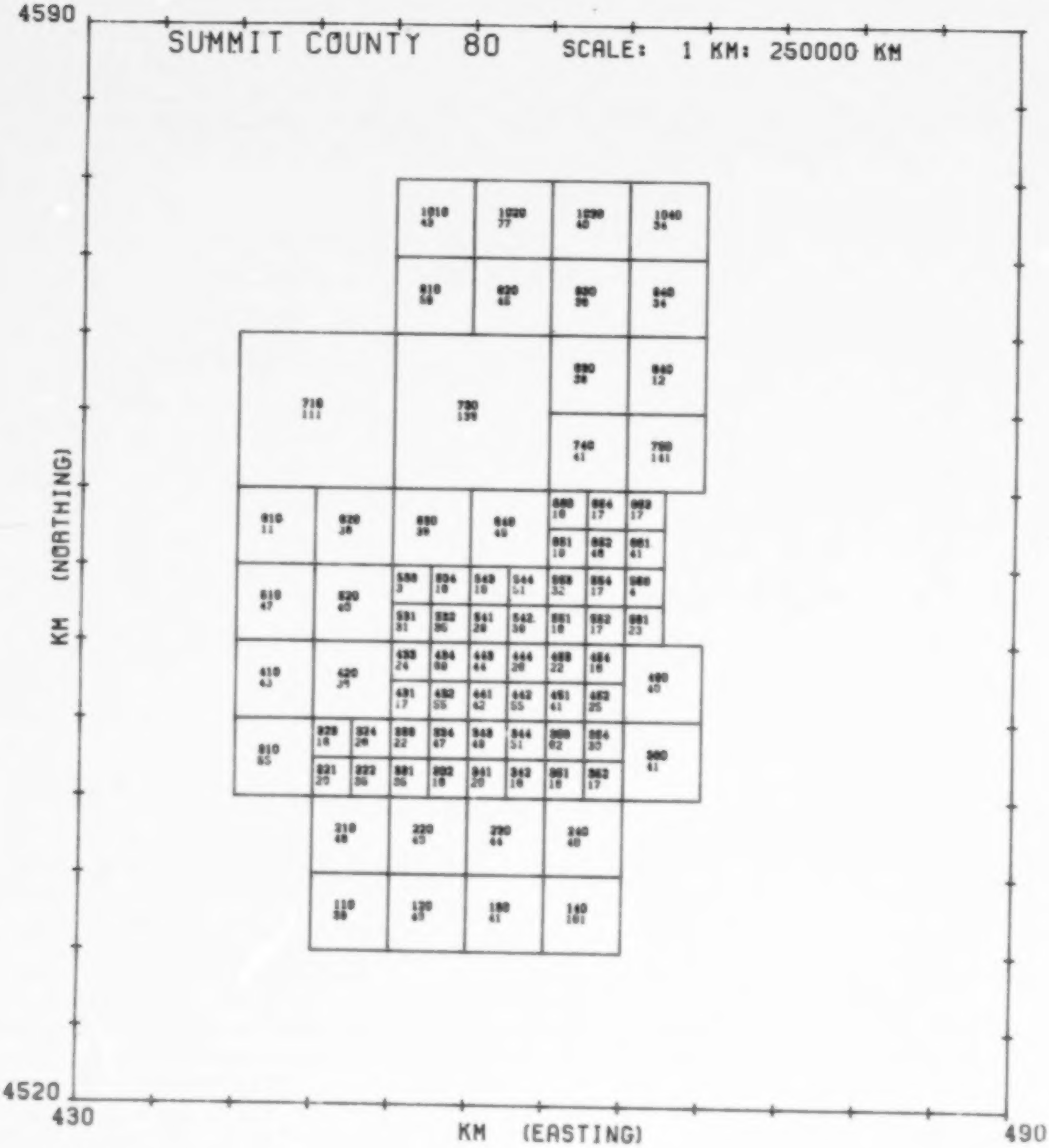

SUMMIT COUNTY 80
SCALE: 1 KM: 250000 KM
4590
4520
430
490
KM (NORTHING)
KM (EASTING)
1010 43
1020 77
1030 40
1040 34
910 56
920 45
930 39
940 34
710 111
730 139
750 28
760 12
740 41
750 141
610 11
620 38
630 39
640 45
653 18
654 17
662 17
651 18
652 48
661 41
510 47
520 60
533 3
534 18
543 18
544 51
553 32
554 17
560 4
531 31
532 36
541 28
542 30
551 18
552 17
561 23
410 43
420 39
433 24
434 60
443 44
444 20
453 22
454 18
460 40
431 17
432 55
441 42
442 55
451 41
452 25
310 65
323 16
324 20
333 22
334 47
343 48
344 51
353 62
354 30
360 41
321 29
322 36
331 36
332 18
341 20
342 18
351 18
352 17
210 48
220 43
230 64
240 40
110 38
120 43
130 41
140 101

Figure 40t. Particulate area grid emissions for Summit County in 1980

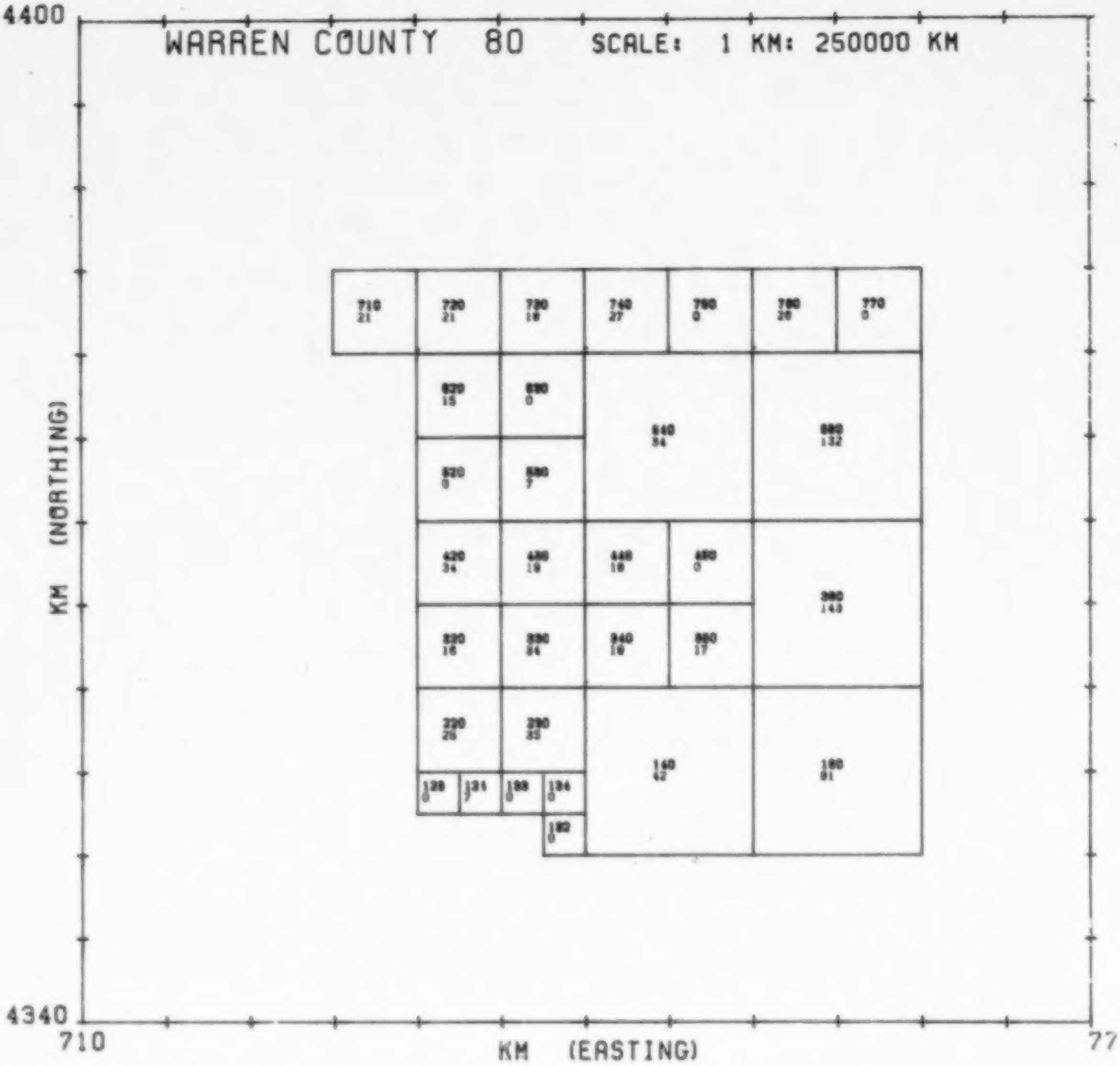
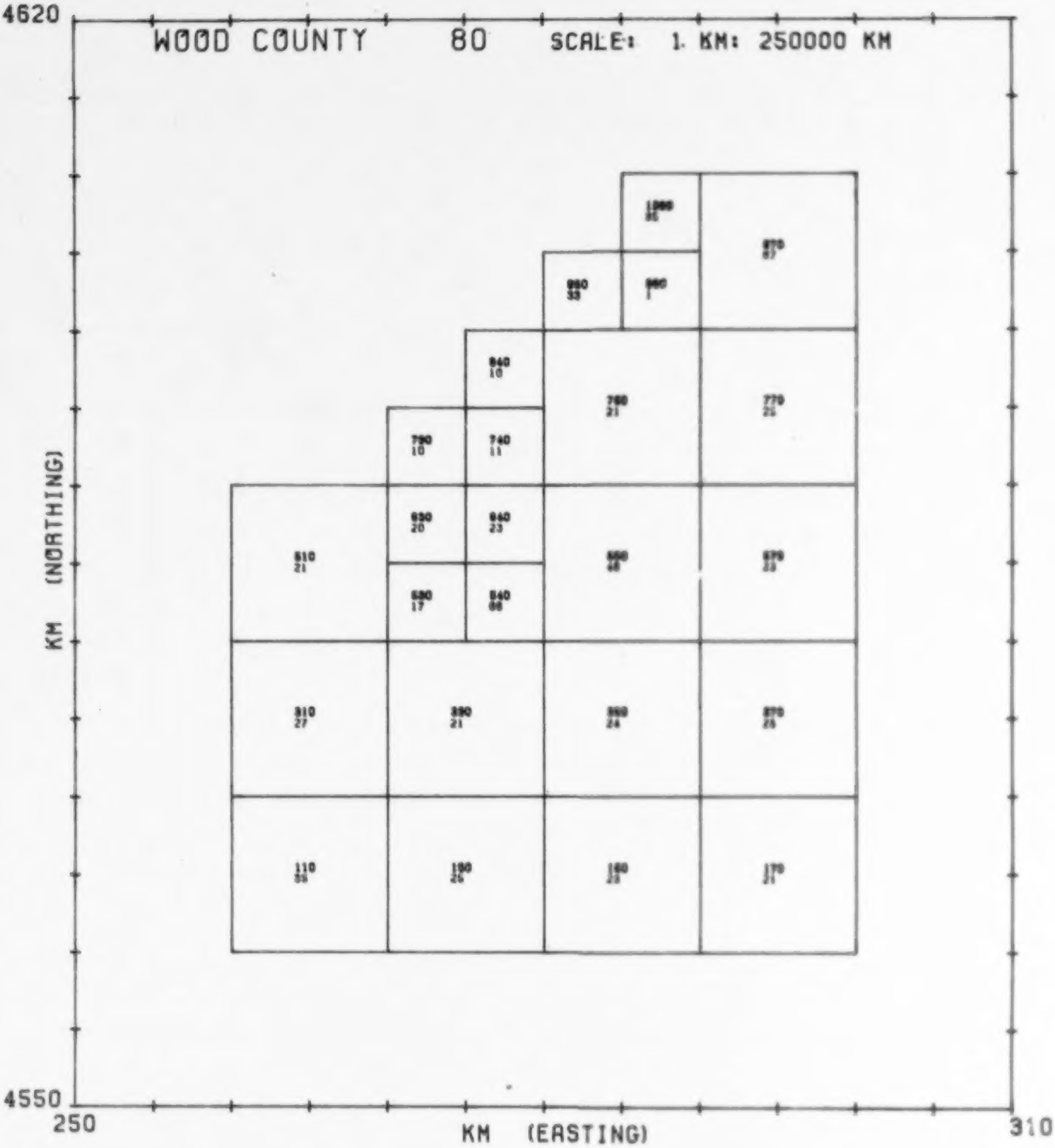

WARREN COUNTY 80 SCALE: 1 KM: 250000 KM
4400
4340
710
77
KM (NORTHING)
KM (EASTING)
710 21
720 21
730 18
740 27
750 0
760 26
770 0
620 15
630 0
640 34
660 132
520 0
530 7
420 34
430 18
440 18
450 0
380 143
320 16
330 34
340 18
350 17
220 26
230 33
160 42
180 81
128 0
131 7
133 0
134 0
132 0

Figure 40u. Particulate area grid emissions for Warren County in 1980



WOOD COUNTY 80 SCALE: 1. KM: 250000 KM
4620
4550
250
310
KM (NORTHING)
KM (EASTING)
1080
880
33
890
1
840
10
760
21
770
21
790
10
740
11
830
20
840
23
810
21
680
17
560
310
27
390
21
350
24
370
25
110
35
190
25
180
23
170
21

Figure 40v. Particulate area grid emissions for Wood County in 1980

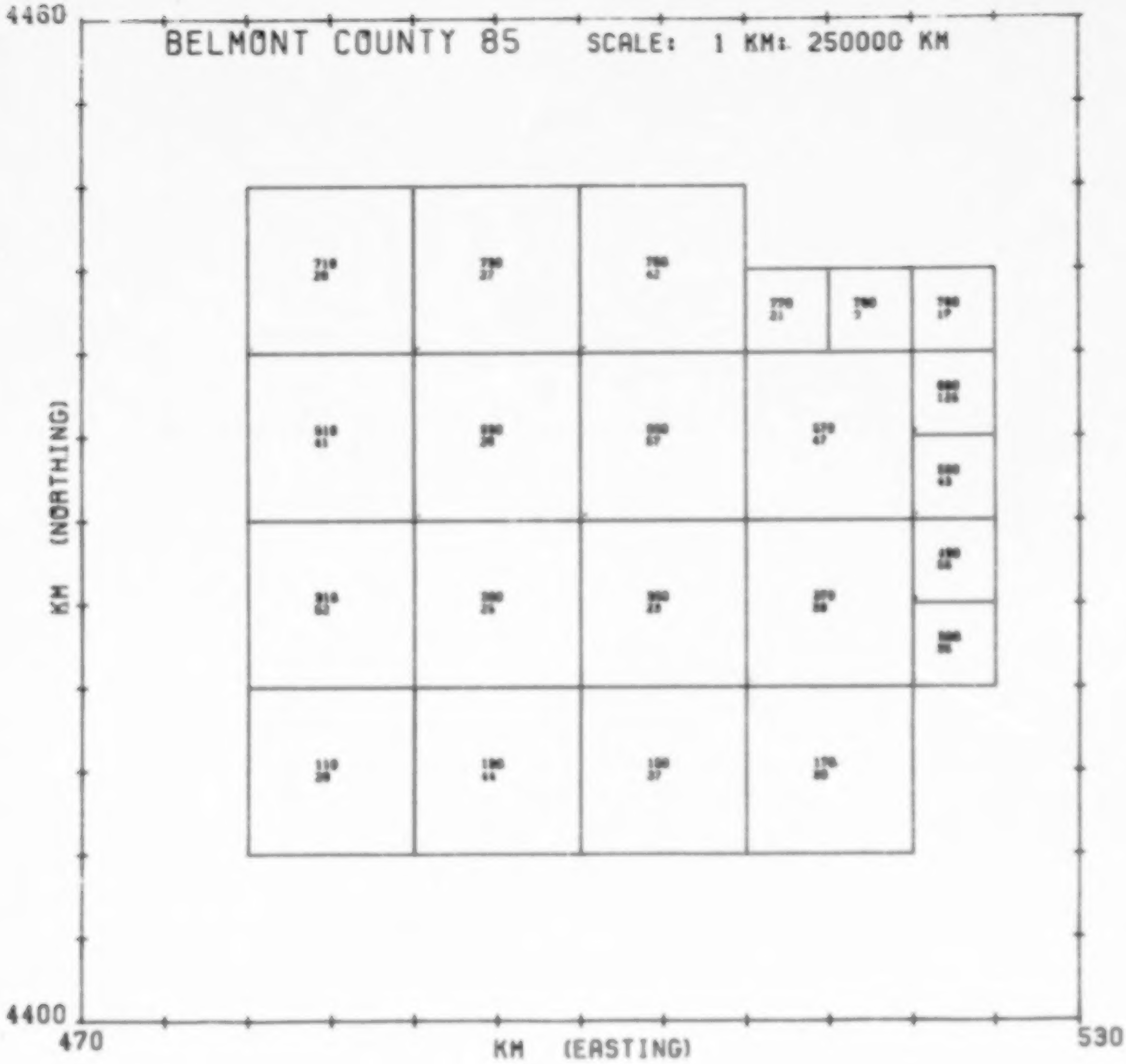

BELMONT COUNTY 85
SCALE: 1 KM: 250000 KM
4460
4400
470
530
KM (NORTHING)
KM (EASTING)

Figure 41a. Particulate area grid emissions for Belmont County in 1985

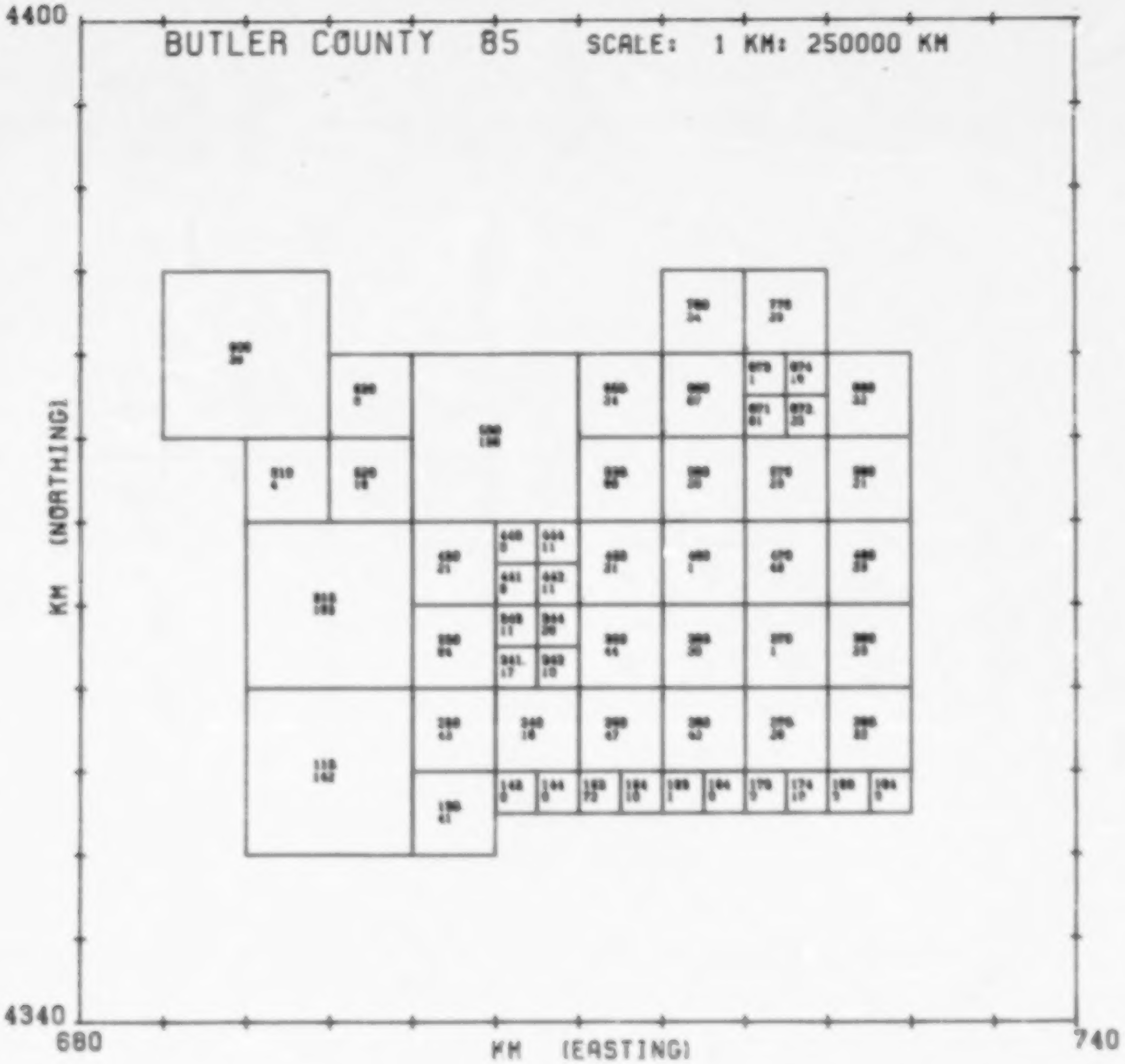

BUTLER COUNTY 85
SCALE: 1 KM: 250000 KM
4400
4340
680
740
KM (NORTHING)
KM (EASTING)

Figure 41b. Particulate area grid emissions for Butler County in 1985

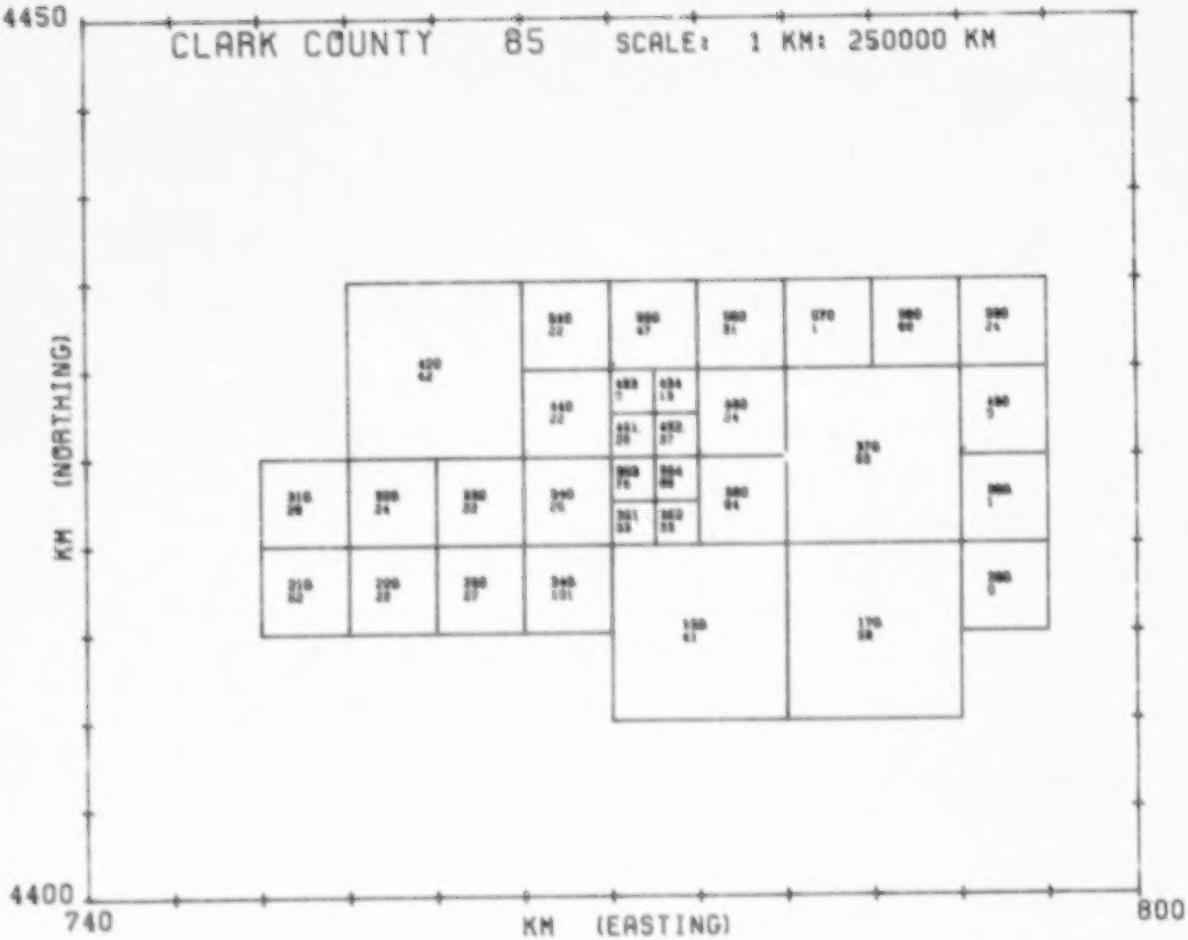

CLARK COUNTY 85 SCALE: 1 KM: 250000 KM
4450
4400
740
800
KM (NORTHING)
KM (EASTING)

Figure 41c. Particulate area grid emissions for Clark County in 1985

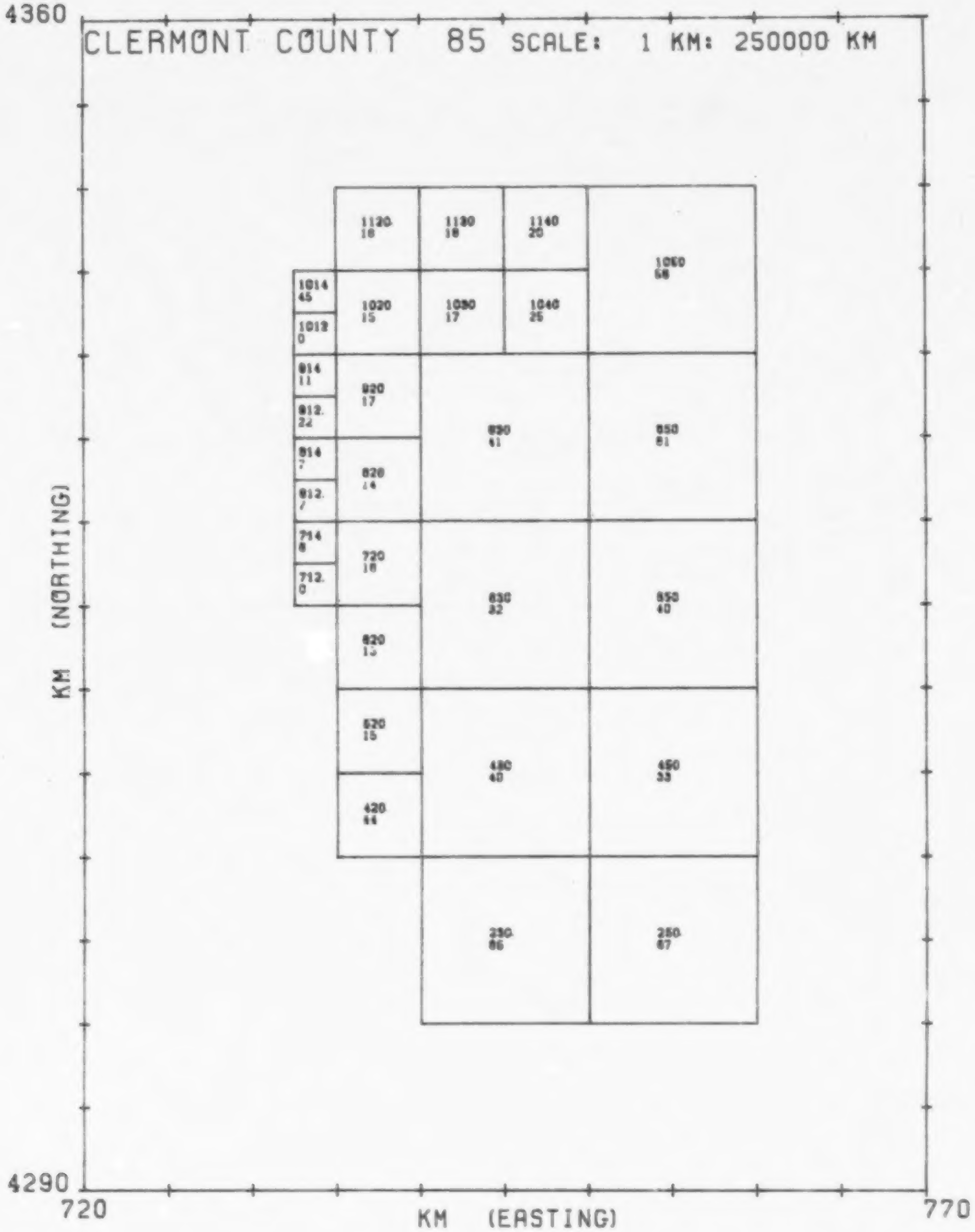

CLERMONT COUNTY 85 SCALE: 1 KM: 250000 KM
4360
4290
720
770
KM (NORTHING)
KM (EASTING)
1120 18
1130 18
1140 20
1050 58
1014 45
1012 0
1020 15
1030 17
1040 25
914 11
912 22
920 17
830 41
850 81
814 7
812 7
820 14
714 8
712 0
720 18
630 32
650 40
620 13
520 15
430 40
450 33
420 44
230 86
250 67

Figure 41d. Particulate area grid emissions for Clermont County in 1985

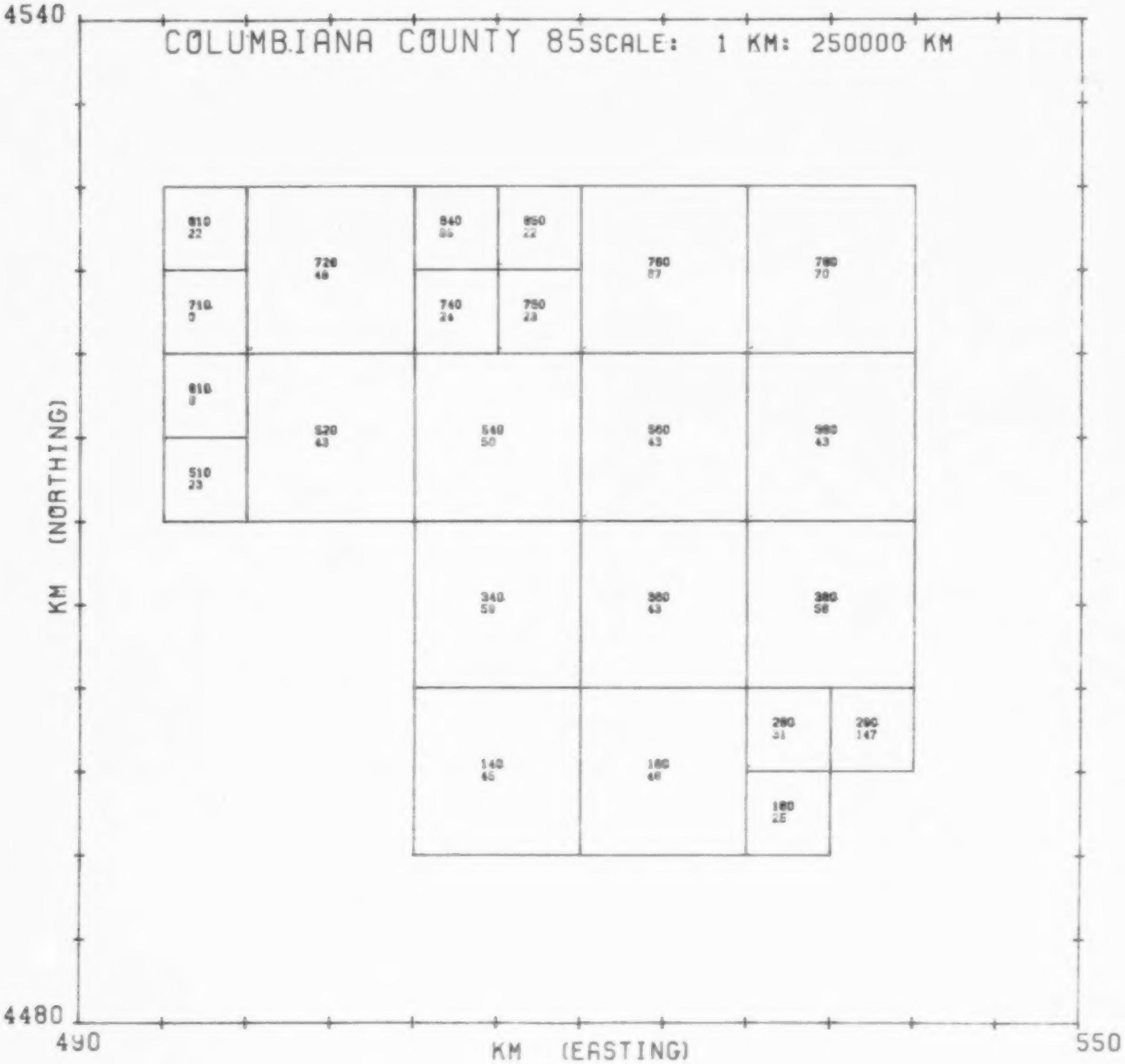

COLUMBIANA COUNTY 85SCALE: 1 KM: 250000 KM
4540
4480
490
550
KM (NORTHING)
KM (EASTING)
810
22
720
48
840
86
850
22
760
87
780
70
710
0
740
24
750
23
610
8
520
43
540
50
560
43
580
43
510
23
340
59
360
43
380
58
280
31
290
147
140
45
160
48
180
25

Figure 41e. Particulate area grid emissions for Columbiana County in 1985

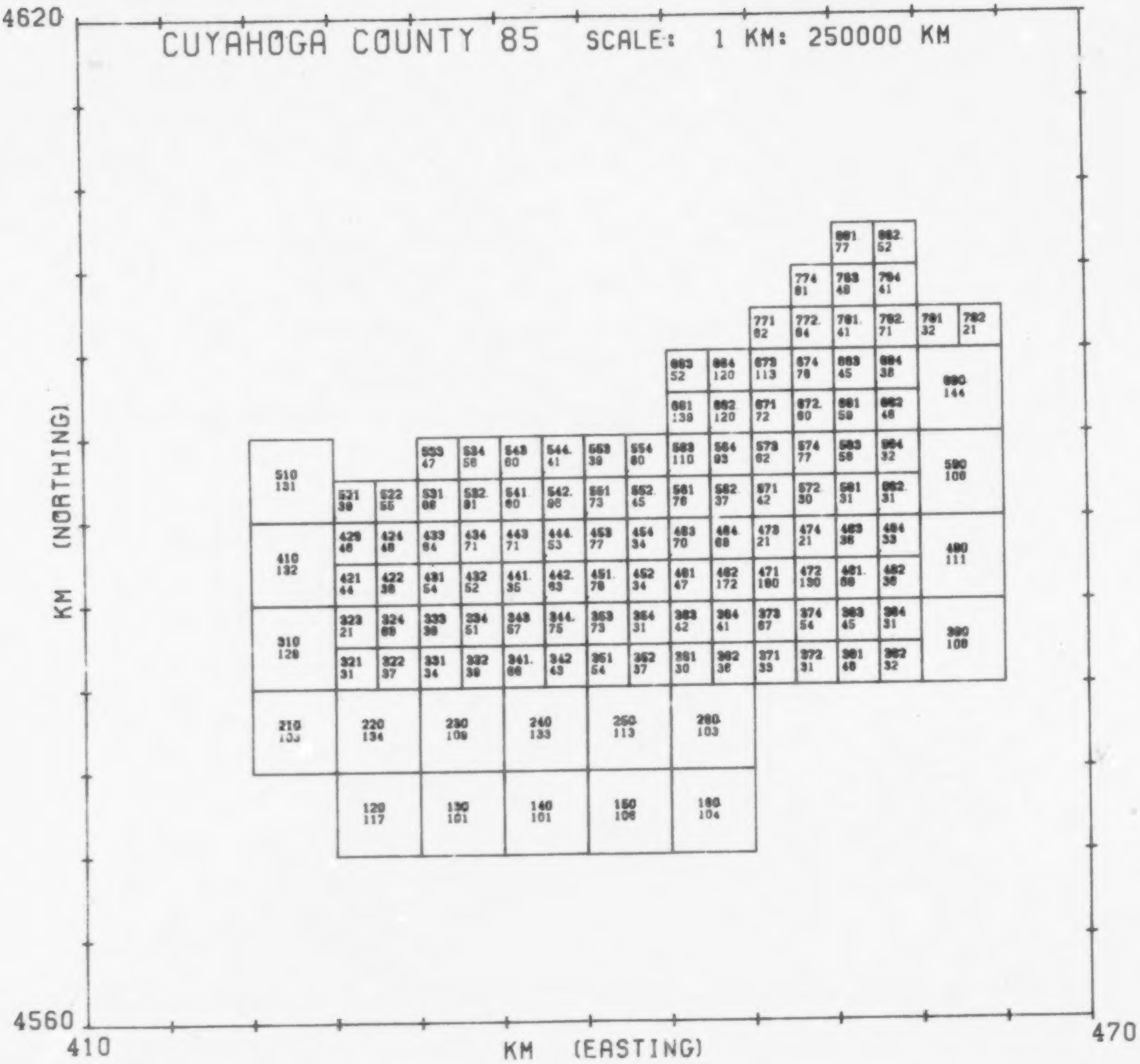

CUYAHOGA COUNTY 85 SCALE: 1 KM: 250000 KM
4620
4560
410
470
KM (NORTHING)
KM (EASTING)
881 77
882 52
774 81
783 48
784 41
771 82
772 84
781 41
782 71
791 32
792 21
663 52
664 120
673 113
674 78
683 45
684 38
690 144
661 139
662 120
671 72
672 60
681 59
682 48
533 47
534 56
543 60
544 41
553 39
554 80
563 110
564 93
573 62
574 77
583 58
584 32
590 100
510 131
521 39
522 55
531 66
532 81
541 80
542 66
551 73
552 45
561 78
562 37
571 42
572 30
581 31
582 31
410 132
423 48
424 48
433 64
434 71
443 71
444 53
453 77
454 34
463 70
464 68
473 21
474 21
483 36
484 33
490 111
421 44
422 38
431 54
432 52
441 35
442 63
451 78
452 34
461 47
462 172
471 100
472 130
481 66
482 38
310 128
323 21
324 69
333 39
334 51
343 57
344 75
353 73
354 31
363 42
364 41
373 67
374 54
383 45
384 31
390 100
321 31
322 37
331 34
332 39
341 66
342 43
351 54
352 37
361 30
362 38
371 33
372 31
381 48
382 32
210 103
220 134
230 109
240 133
250 113
260 103
120 117
130 101
140 101
150 106
160 104

Figure 41f. Particulate area grid emissions for Cuyahoga County in 1985

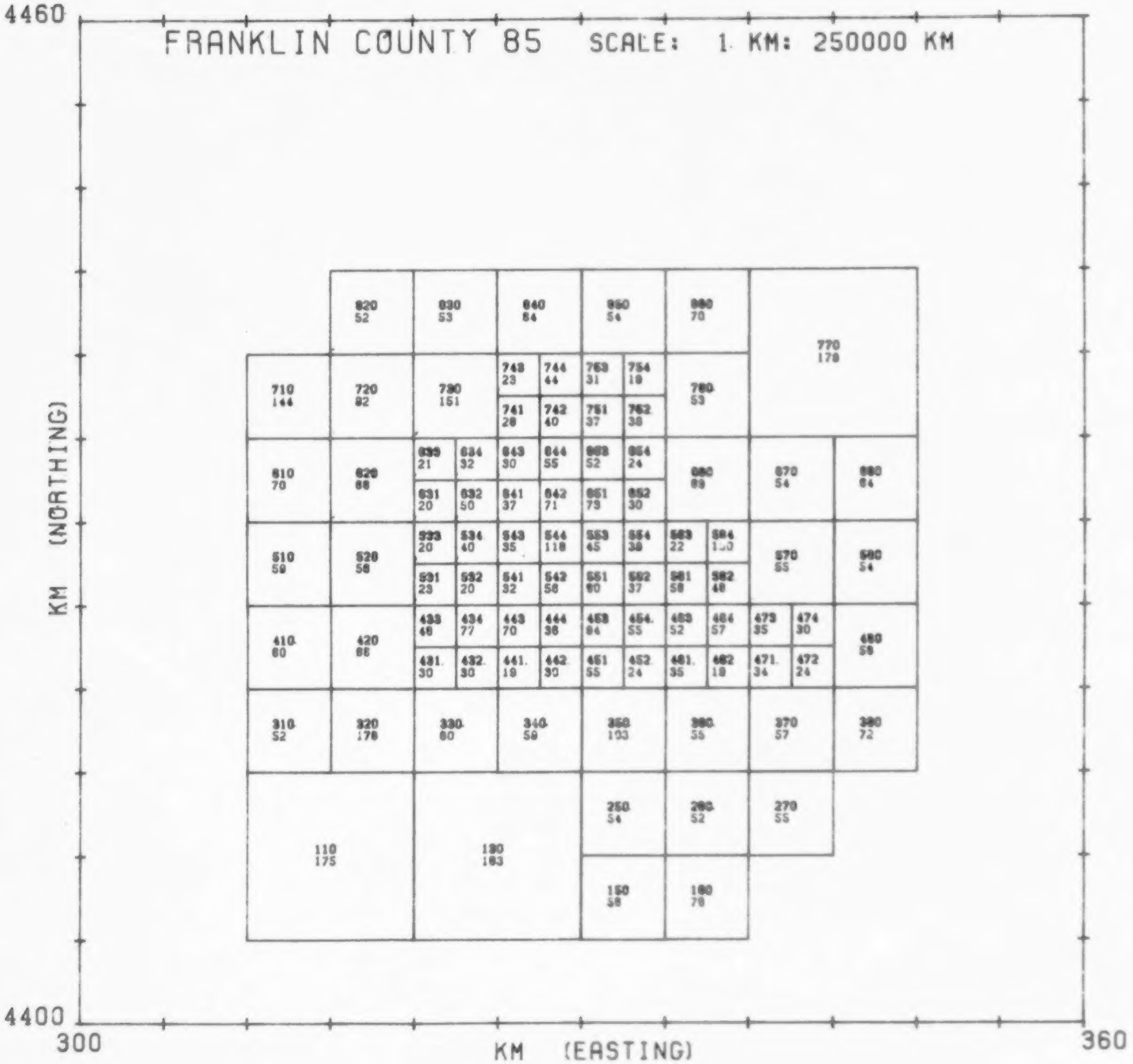

FRANKLIN COUNTY 85 SCALE: 1 KM: 250000 KM
4460
4400
300
360
KM (NORTHING)
KM (EASTING)
820 52
830 53
840 84
850 54
860 70
710 144
720 82
730 151
743 23
744 44
753 31
754 19
741 28
742 40
751 37
752 38
760 53
770 178
610 70
620 88
633 21
634 32
643 30
644 55
653 52
654 24
631 20
632 50
641 37
642 71
651 79
652 30
660 89
670 54
680 64
510 59
520 58
533 20
534 40
543 35
544 118
553 65
554 38
563 22
564 1?0
531 23
532 20
541 32
542 58
551 90
552 37
561 58
562 48
570 55
580 54
410 60
420 68
433 48
434 77
443 70
444 38
453 84
454 55
463 52
464 57
473 35
474 30
431 30
432 30
441 19
442 30
451 55
452 24
461 35
462 19
471 34
472 24
480 59
310 52
320 178
330 80
340 59
350 103
360 55
370 57
380 72
250 54
260 52
270 55
110 175
120 183
150 58
160 78

Figure 41g. Particulate area grid emissions for Franklin County in 1985

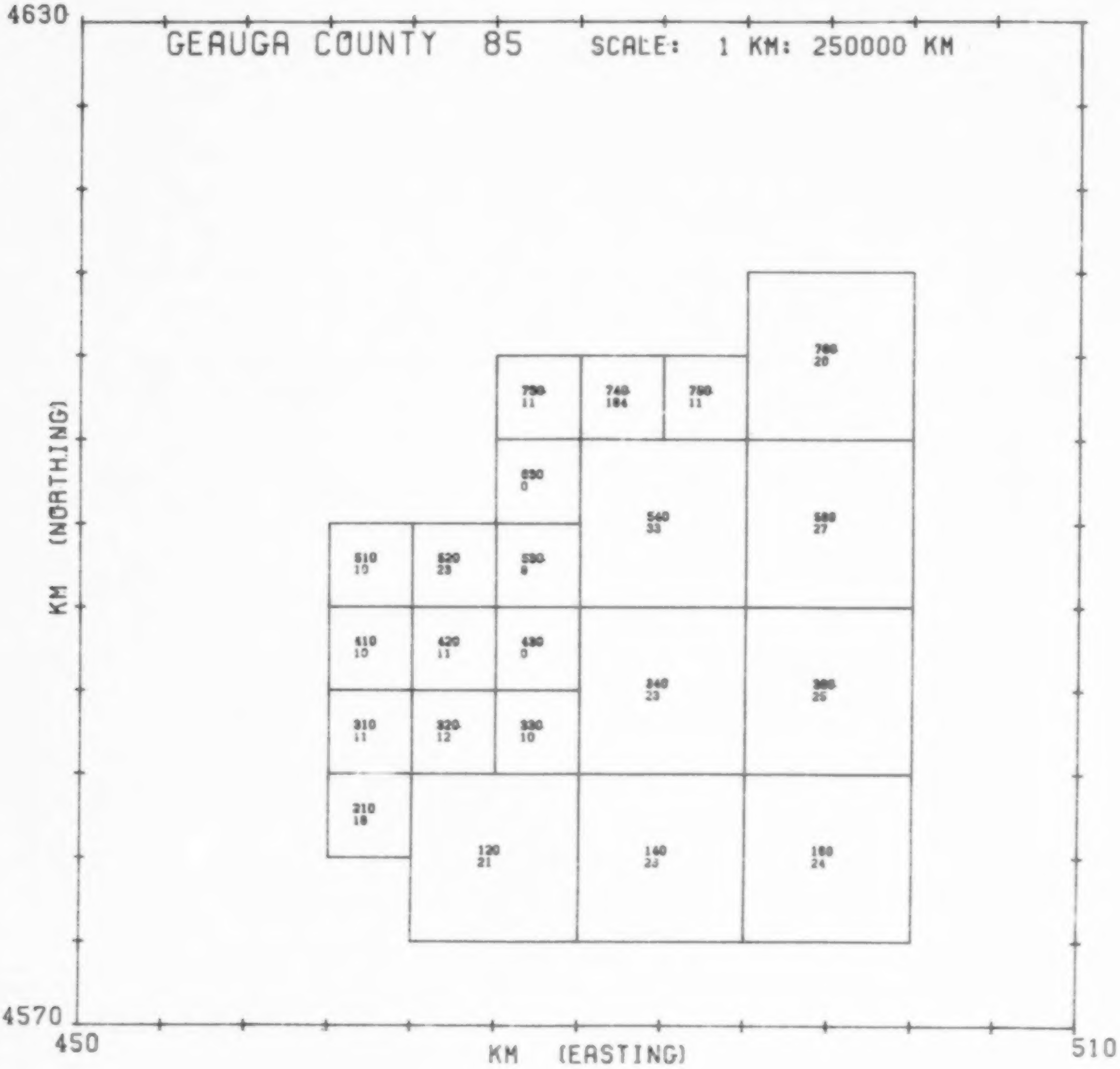
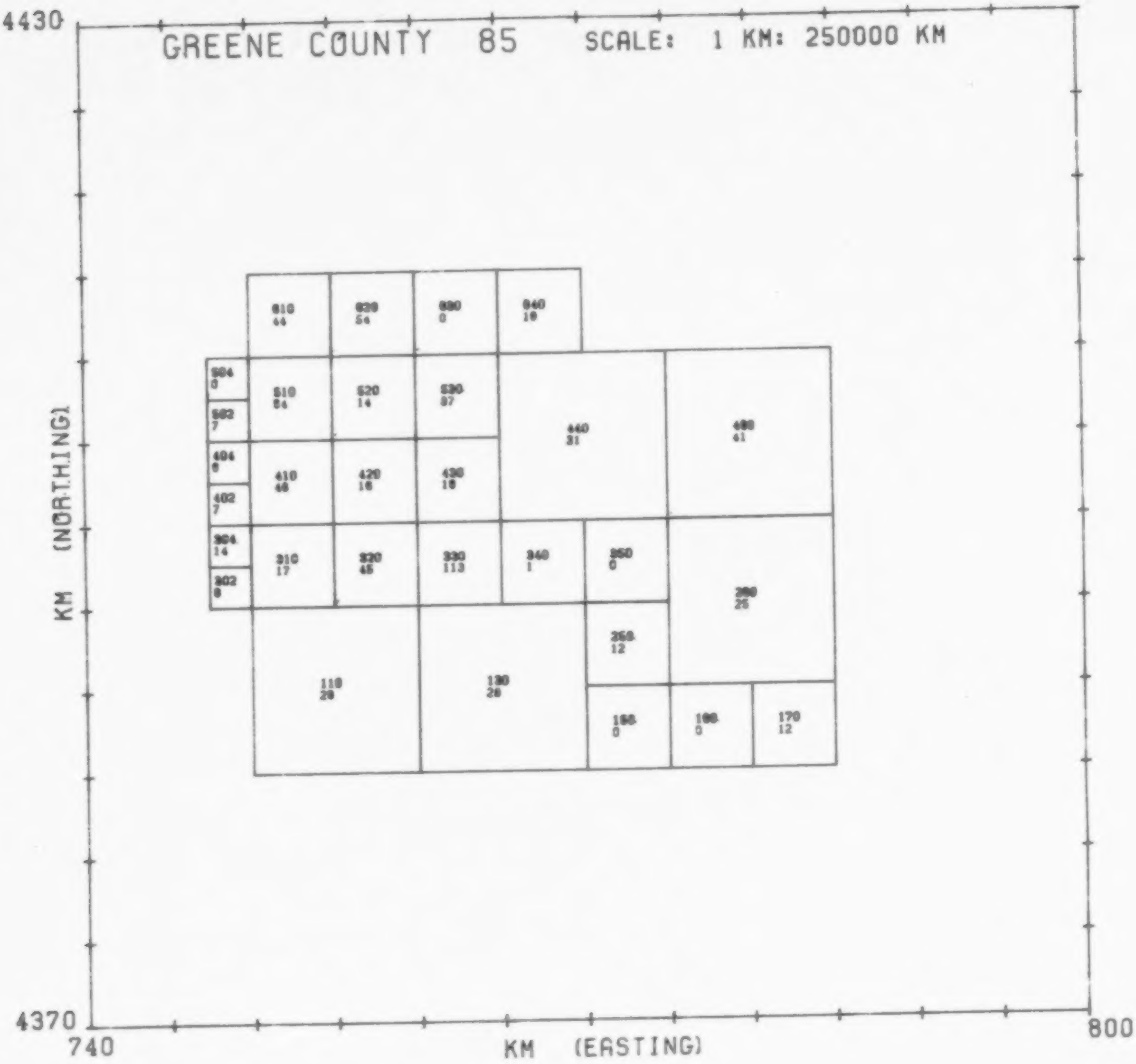

4630
GEAUGA COUNTY 85 SCALE: 1 KM: 250000 KM
KM (NORTHING)
730
11
740
184
750
11
780
20
630
0
560
33
580
27
510
10
520
23
530
8
410
10
420
11
430
0
340
23
360
25
310
11
320
12
330
10
210
18
120
21
140
23
160
24
4570
450
KM (EASTING)
510

Figure 41h. Particulate area grid emissions for Geauga County in 1985



4430
GREENE COUNTY 85
SCALE: 1 KM: 250000 KM
KM (NORTHING)
4370
740
KM (EASTING)
800
610
44
620
54
630
0
640
19
504
0
502
7
510
54
520
14
530
37
440
31
480
41
404
6
410
46
420
16
430
19
402
7
304
14
310
17
320
45
330
113
340
1
350
0
302
8
380
25
360
12
110
28
130
28
150
0
160
0
170
12

Figure 41i. Particulate area grid emissions for Greene County in 1985

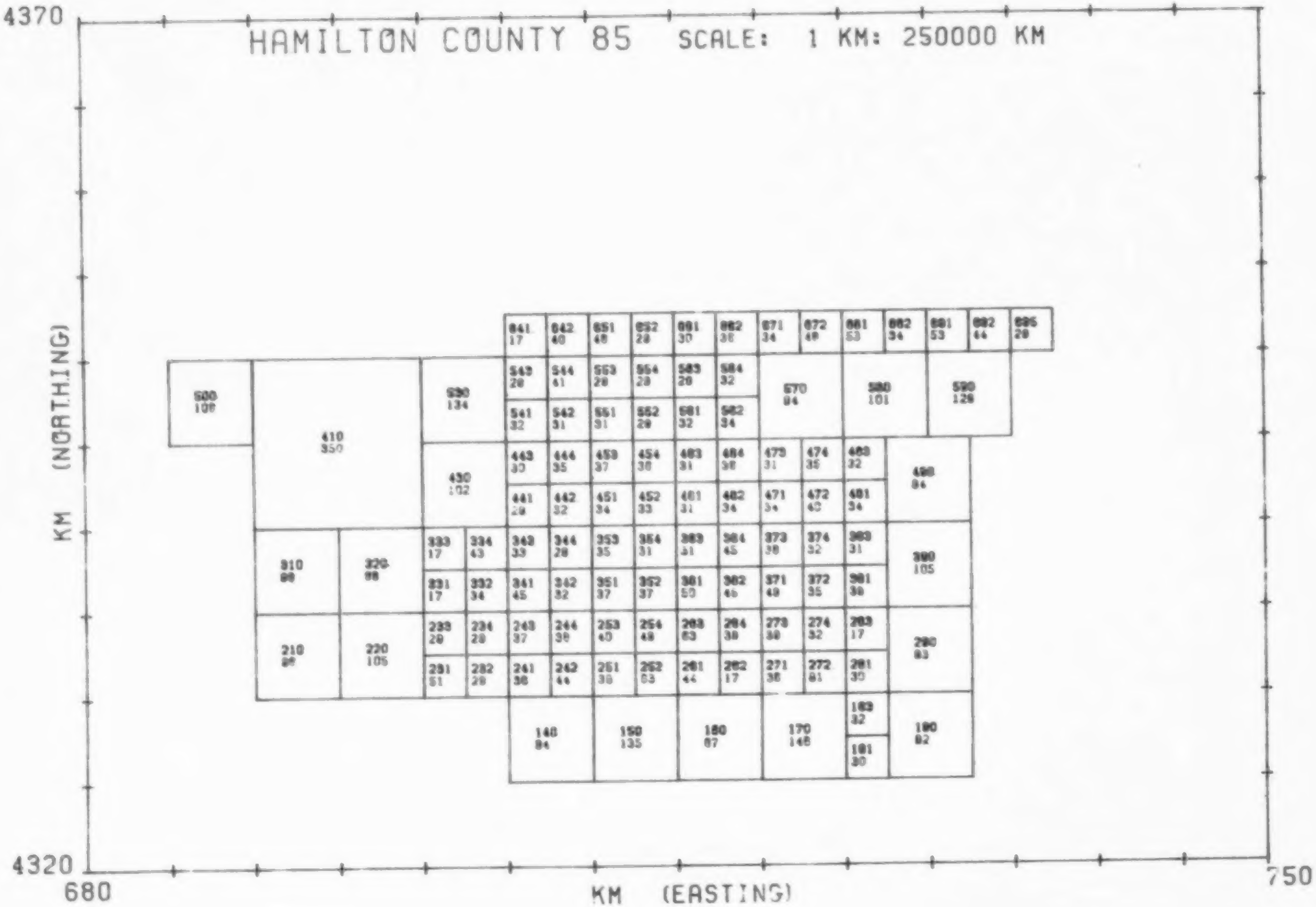

HAMILTON COUNTY 85 SCALE: 1 KM: 250000 KM
4370
4320
680
750
KM (NORTHING)
KM (EASTING)

Figure 41j. Particulate area grid emissions for Hamilton County in 1985

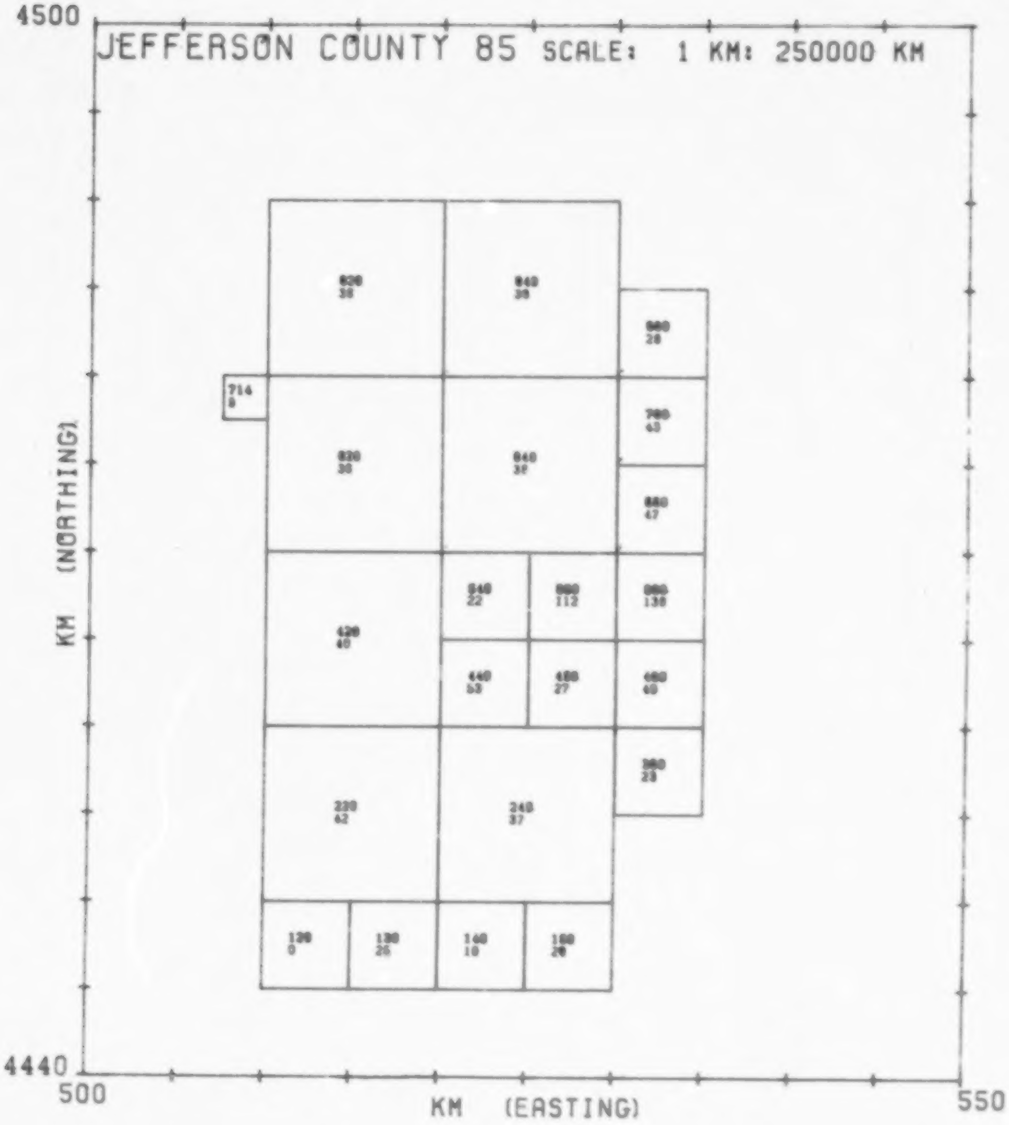

JEFFERSON COUNTY 85 SCALE: 1 KM: 250000 KM
4500
4440
500
550
KM (NORTHING)
KM (EASTING)
820 38
840 38
860 28
714 8
820 38
840 38
760 43
880 47
540 22
560 112
660 138
420 40
440 53
460 27
460 40
360 23
220 62
240 37
120 0
130 26
140 10
150 28

Figure 41k. Particulate area grid emissions for Jefferson County in 1985

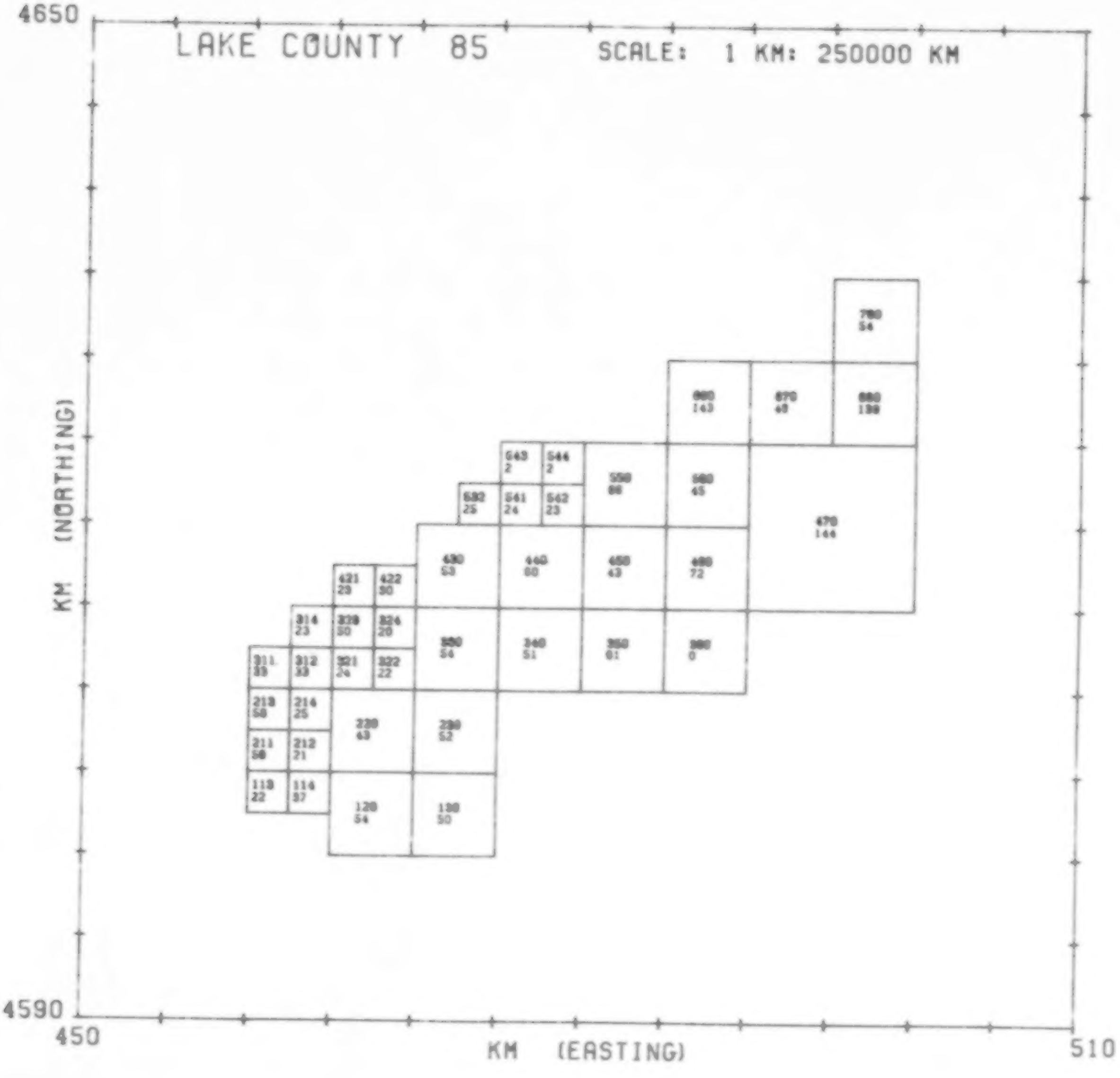

4650
LAKE COUNTY 85
SCALE: 1 KM: 250000 KM
KM (NORTHING)
780
54
660
143
670
48
680
139
543
2
544
2
550
88
560
45
532
25
541
24
542
23
470
144
430
53
440
80
450
43
460
72
421
28
422
30
314
23
323
30
324
20
330
54
340
51
350
61
360
0
311
33
312
33
321
24
322
22
213
58
214
25
220
43
230
52
211
58
212
21
113
22
114
37
120
54
130
50
4590
450
KM (EASTING)
510

Figure 41ℓ. Particulate area grid emissions for Lake County in 1985

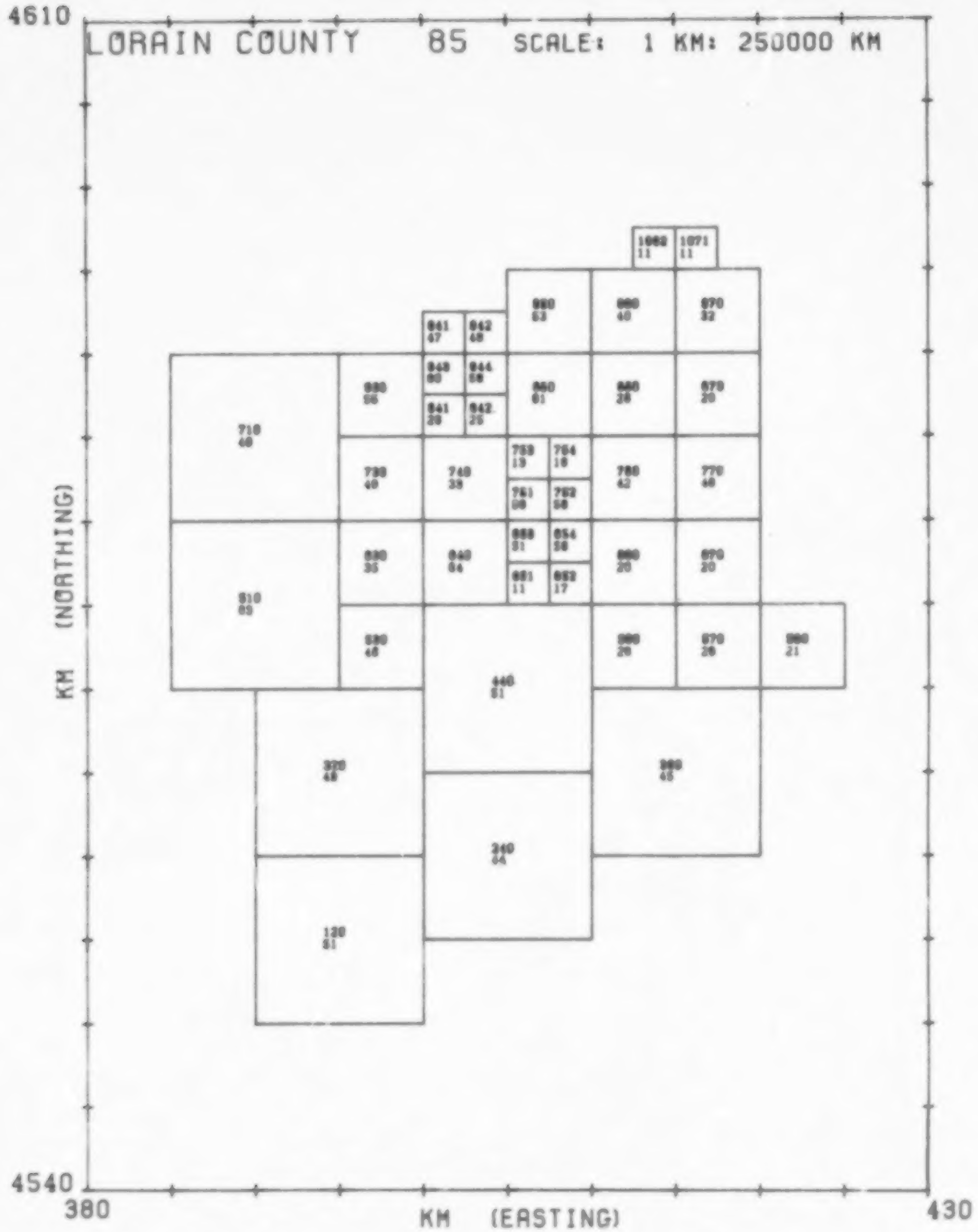
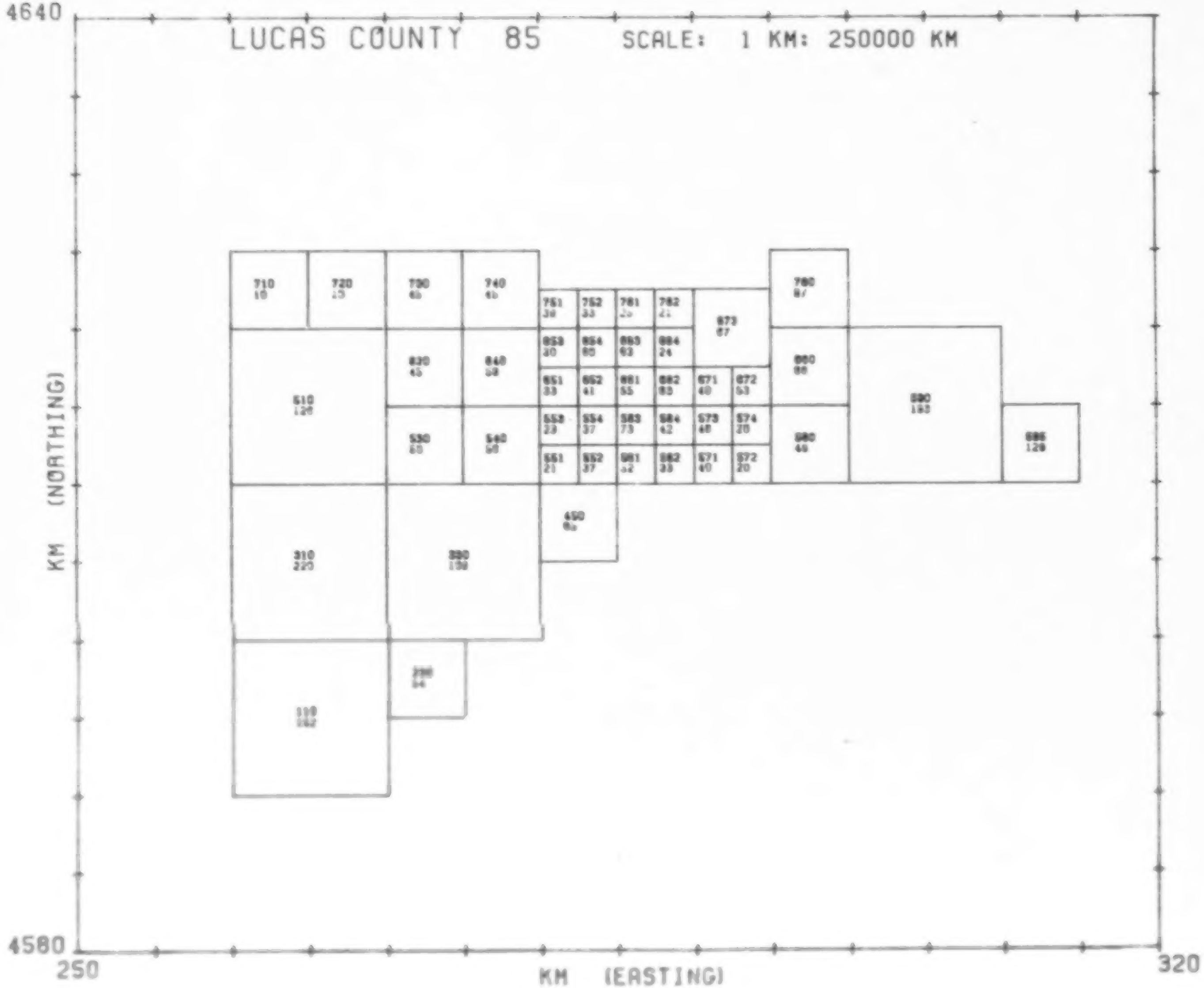

LORAIN COUNTY 85 SCALE: 1 KM: 250000 KM
4610
4540
KM (NORTHING)
380
430
KM (EASTING)
1071
11
710
740
770
440
51
340
64
130
51

Figure 41m. Particulate area grid emissions for Lorain County in 1985



4640
LUCAS COUNTY 85
SCALE: 1 KM: 250000 KM
4580
250
320
KM (NORTHING)
KM (EASTING)
710 10
720 15
730 65
740 46
751 38
752 33
761 25
762 21
873 87
780 87
853 30
854 80
863 63
864 24
851 33
852 41
861 55
862 83
871 40
872 53
860 88
553 23
554 37
563 73
564 42
573 48
574 20
580 46
551 21
552 37
561 42
562 33
571 40
572 20
610 128
820 45
840 58
530 60
540 58
890 183
885 128
310 220
390 150
450 62
230 24
110 182

Figure 41n. Particulate area grid emissions for Lucas County in 1985

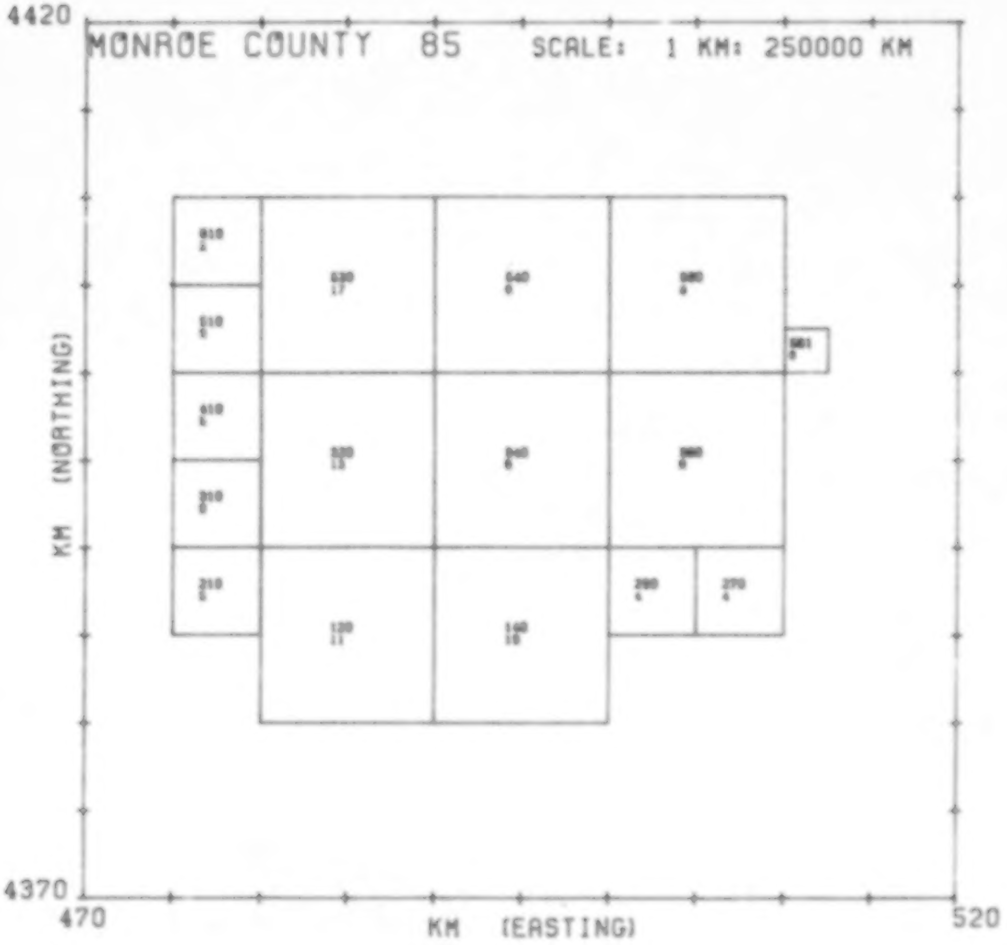

MONROE COUNTY 85 SCALE: 1 KM: 250000 KM
4420
4370
470
520
KM (NORTHING)
KM (EASTING)
530
17
510
310
210
120
11
140
10
270
4
581

Figure 41o. Particulate area grid emissions for Monroe County in 1985

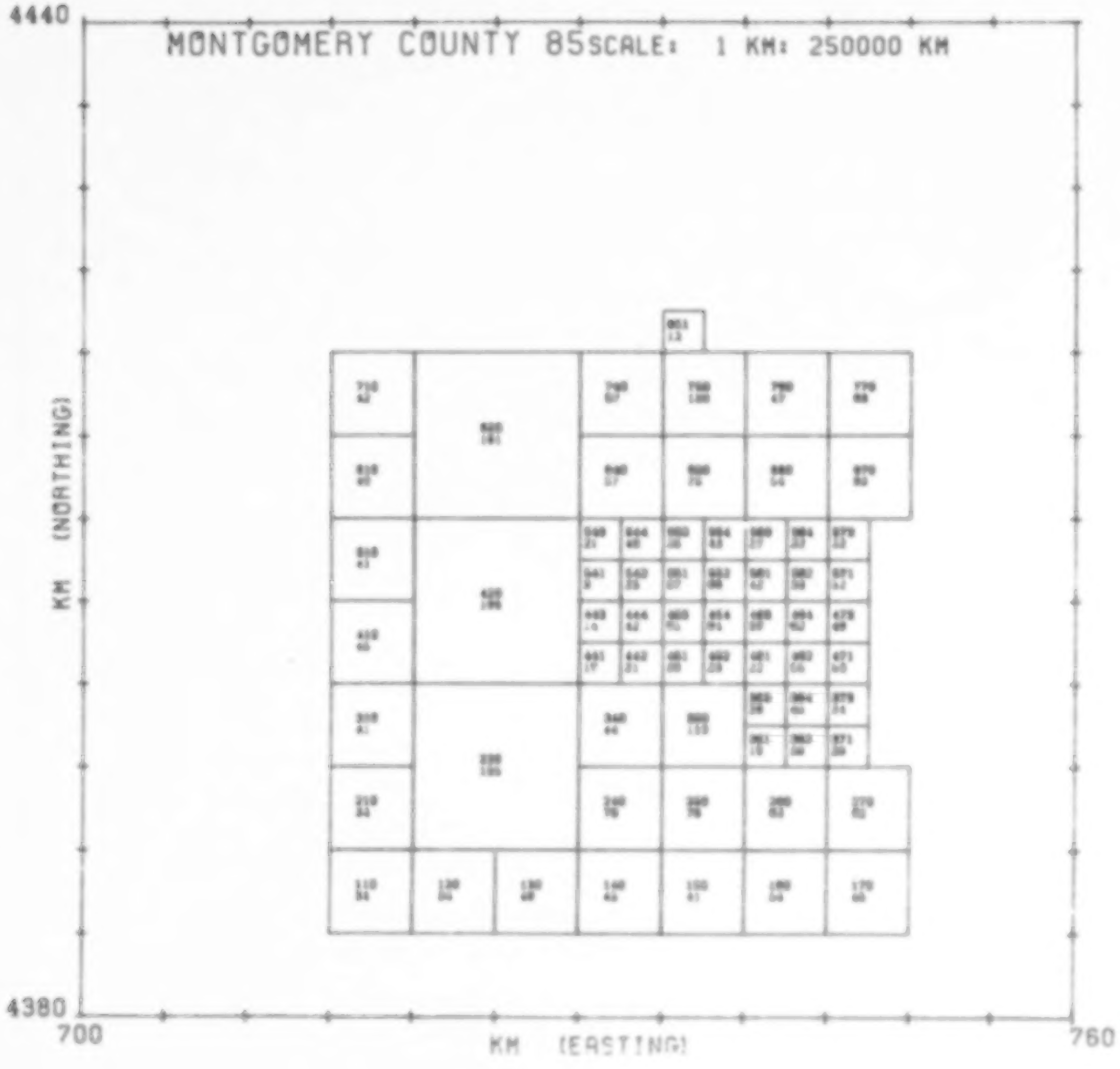

MONTGOMERY COUNTY 85
SCALE: 1 KM: 250000 KM
4440
4380
700
760
KM (NORTHING)
KM (EASTING)

Figure 41p. Particulate area grid emissions for Montgomery County in 1985

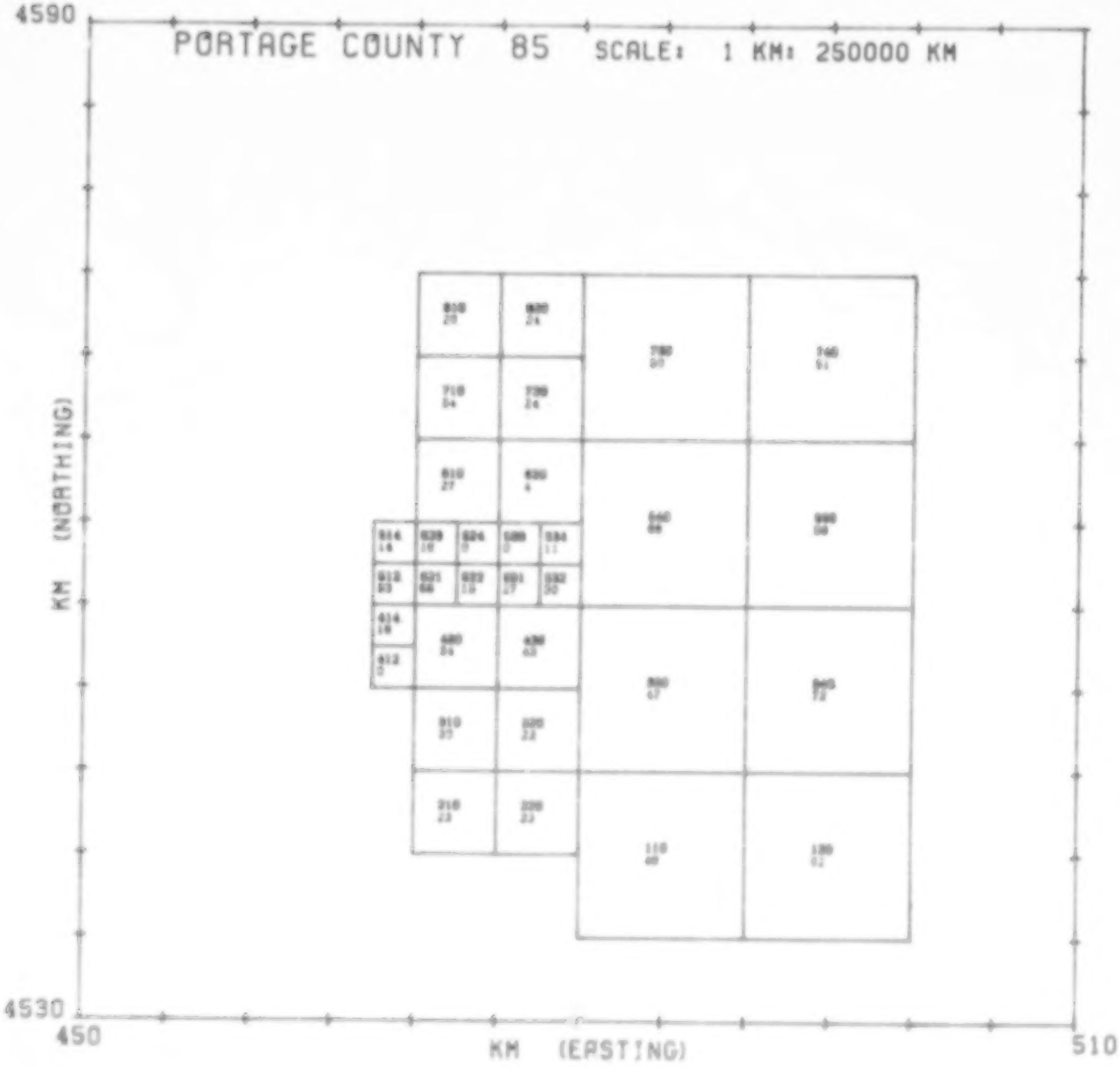

4590
PORTAGE COUNTY 85 SCALE: 1 KM: 250000 KM
KM (NORTHING)
710
210
220
110
4530
450
KM (EASTING)
510

Figure 41q. Particulate area grid emissions for Portage County in 1985

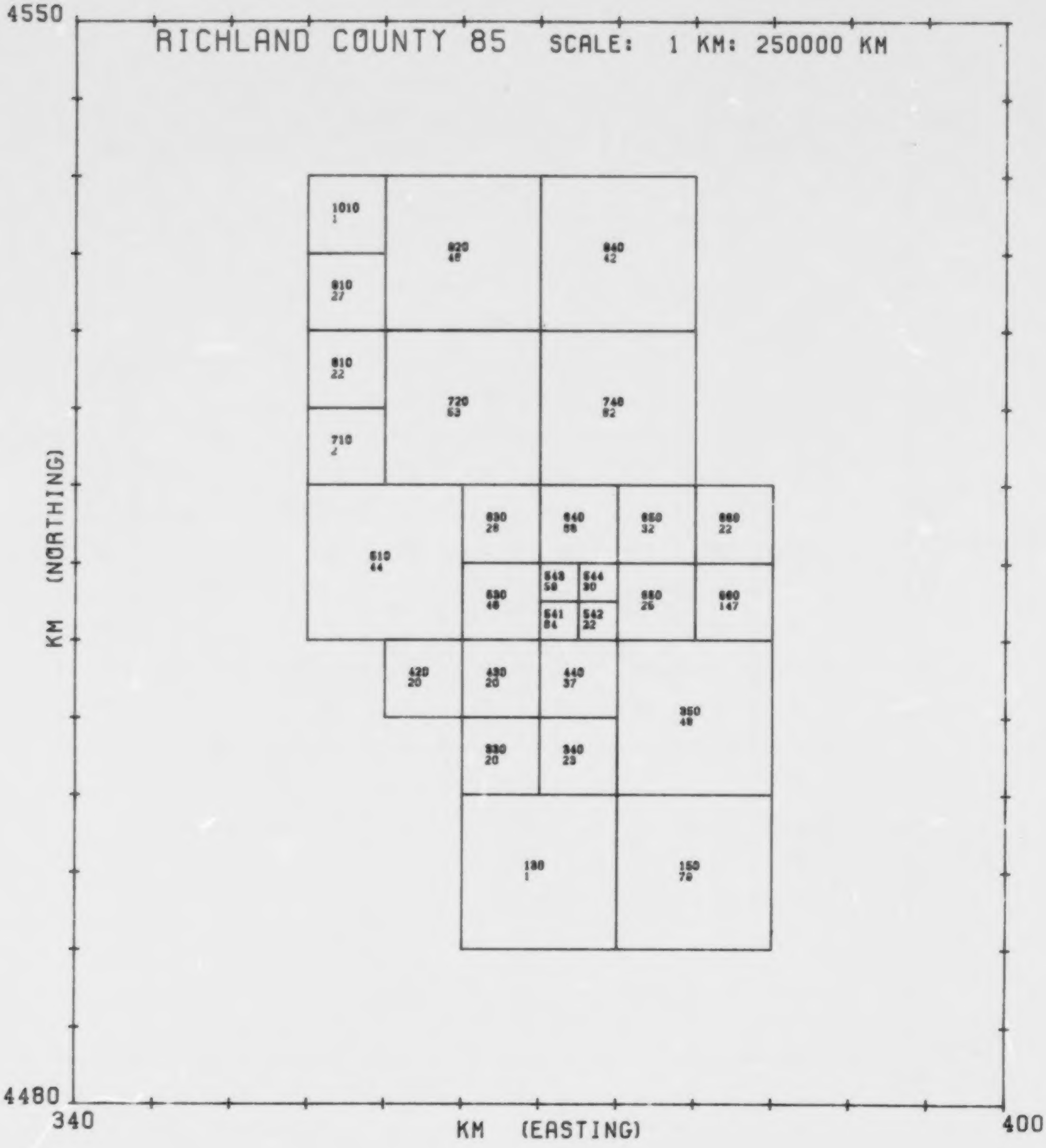
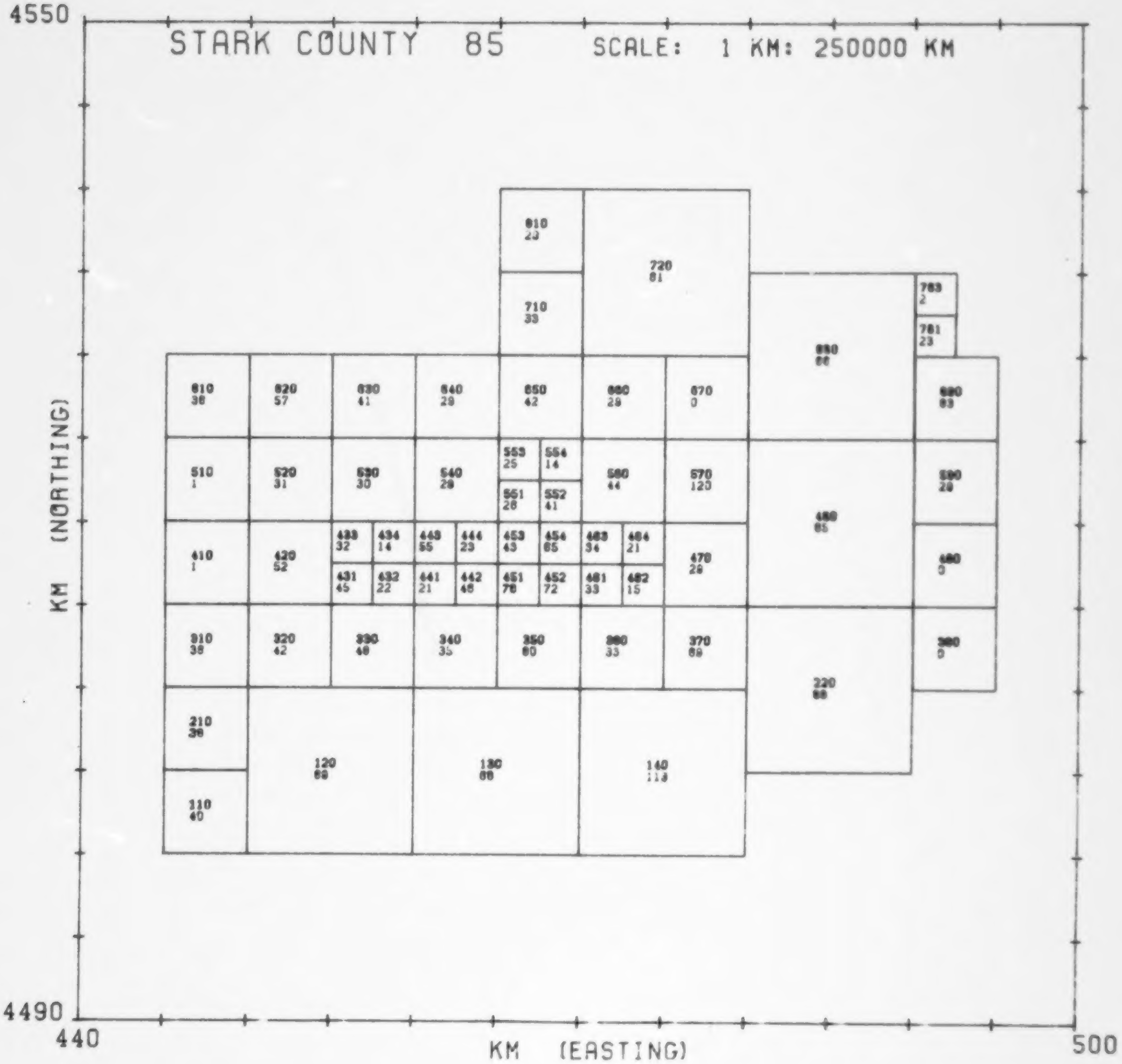

RICHLAND COUNTY 85 SCALE: 1 KM: 250000 KM
4550
4480
340
400
KM (NORTHING)
KM (EASTING)
1010
1
920
48
940
42
910
27
810
22
720
63
740
82
710
2
630
28
640
88
650
32
660
22
510
44
530
48
543
58
544
30
541
84
542
22
550
26
560
147
420
20
430
20
440
37
350
48
330
20
340
23
130
1
150
79

Figure 41r. Particulate area grid emissions for
Richland County in 1985



4550
STARK COUNTY 85
SCALE: 1 KM: 250000 KM
KM (NORTHING)
4490
440
KM (EASTING)
500
810
23
720
81
710
33
783
2
781
23
680
66
610
38
620
57
630
41
640
29
650
42
660
29
670
0
690
83
510
1
520
31
530
30
540
29
553
25
554
14
551
28
552
41
560
44
570
120
590
29
480
65
410
1
420
52
433
32
434
14
443
55
444
23
453
43
454
65
463
34
464
21
431
45
432
22
441
21
442
48
451
78
452
72
461
33
462
15
470
29
490
0
310
38
320
42
330
48
340
35
350
80
360
33
370
69
390
0
220
68
210
38
120
68
130
68
140
113
110
40

Figure 41s. Particulate area grid emissions for Stark County in 1985

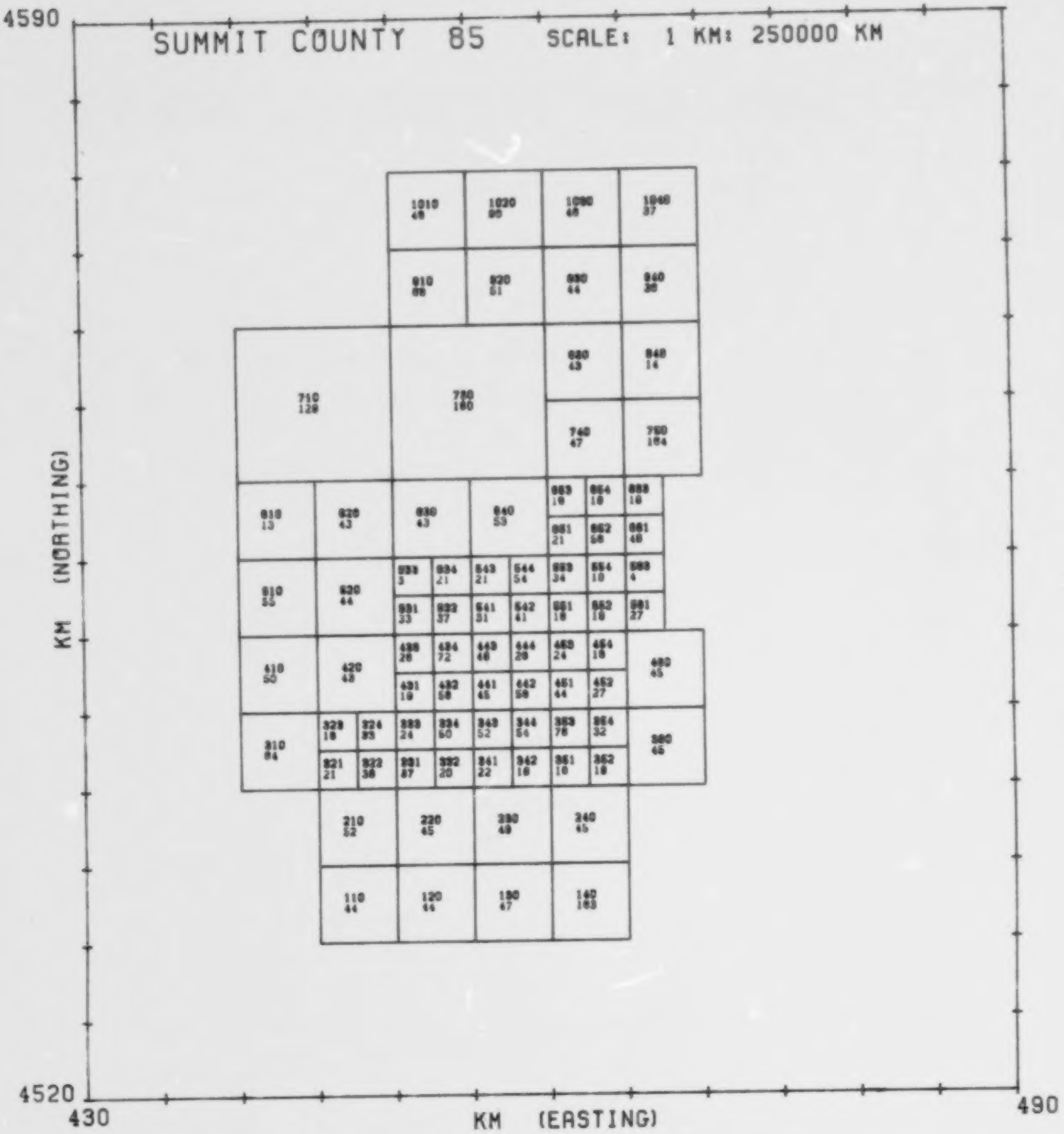

SUMMIT COUNTY 85 SCALE: 1 KM: 250000 KM
4590
4520
430
490
KM (NORTHING)
KM (EASTING)
1010 48
1020 90
1030 48
1040 37
910 88
920 51
930 44
940 38
830 43
840 14
710 128
730 180
740 67
750 184
653 19
654 18
663 18
610 13
620 43
630 43
640 53
651 21
652 58
661 48
533 3
534 21
543 21
544 54
553 34
554 10
563 4
510 55
520 44
531 33
532 37
541 31
542 41
551 18
552 18
561 27
433 28
434 72
443 48
444 28
453 24
454 18
460 45
410 50
420 48
431 18
432 58
441 45
442 58
451 44
452 27
323 18
324 83
333 24
334 60
343 52
344 54
353 78
354 32
310 84
360 65
321 21
322 38
331 87
332 20
341 22
342 18
351 18
352 18
210 52
220 65
230 48
240 65
110 44
120 44
130 47
140 183

Figure 41t. Particulate area grid emissions for Summit County in 1985

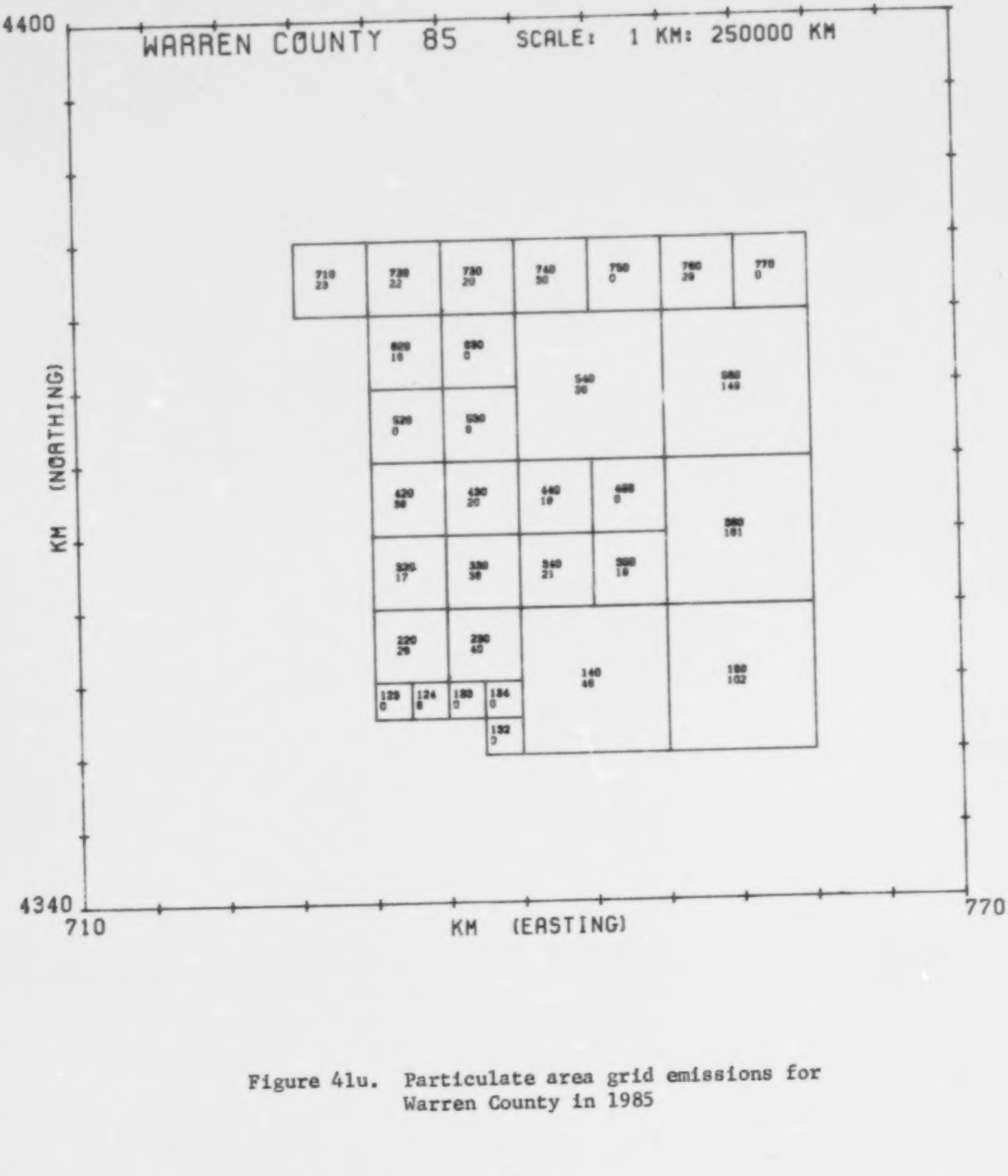
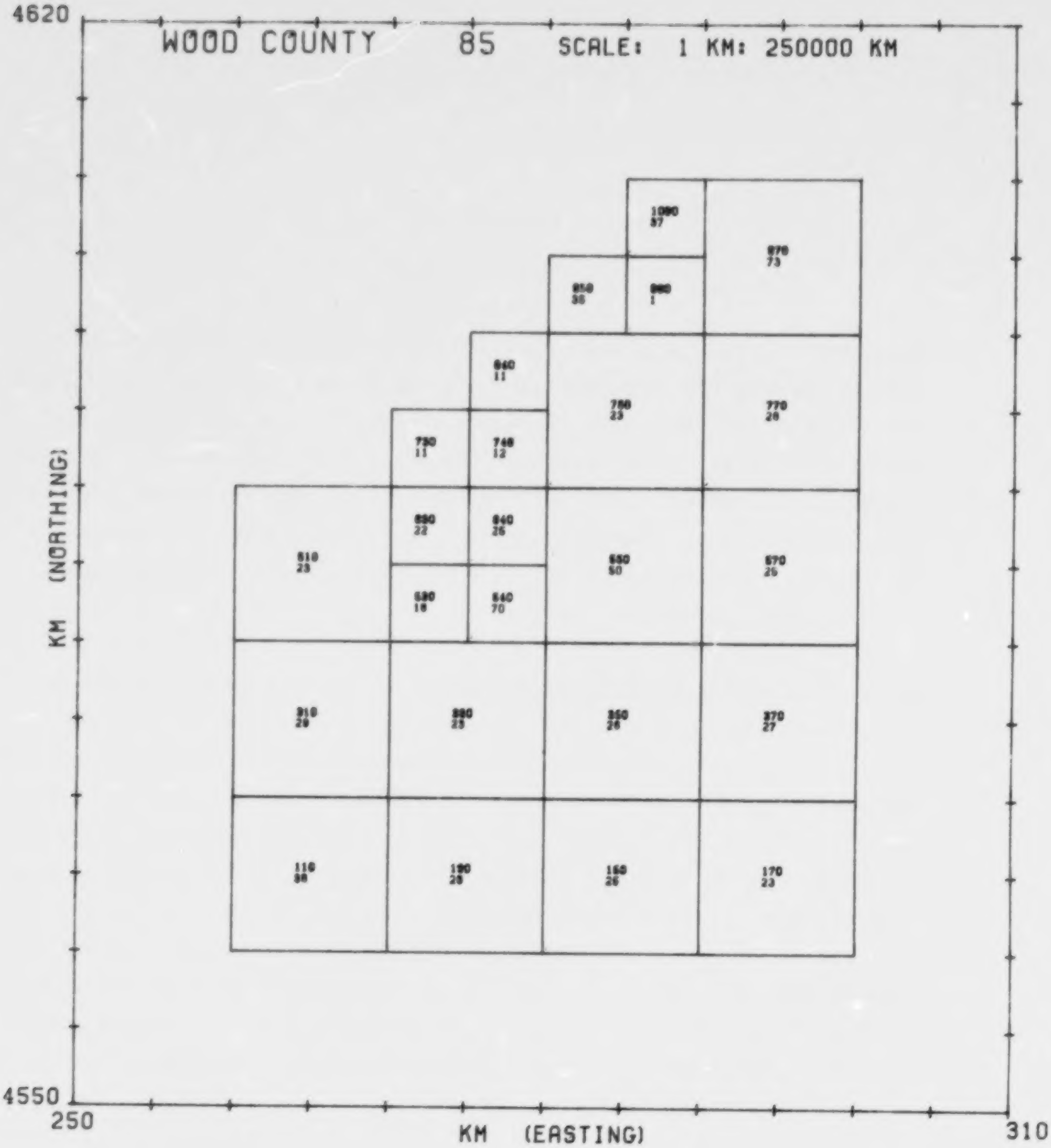

4400
WARREN COUNTY 85
SCALE: 1 KM: 250000 KM
KM (NORTHING)
4340
710
KM (EASTING)
770
710
23
720
22
730
20
740
30
750
0
760
29
770
0
620
16
630
0
540
30
560
140
520
0
530
0
420
38
430
20
440
19
450
0
360
161
320
17
330
38
340
21
350
19
220
29
230
40
140
46
160
102
128
0
124
8
130
0
134
0
132
0

Figure 41u. Particulate area grid emissions for Warren County in 1985



WOOD COUNTY 85 SCALE: 1 KM: 250000 KM
4620
4550
250
310
KM (NORTHING)
KM (EASTING)
1090
87
950
35
960
1
970
73
840
11
750
23
770
28
730
11
740
12
530
22
540
26
510
23
550
50
570
25
530
18
540
70
310
29
330
23
350
26
370
27
110
38
130
28
150
26
170
23

Figure 41v. Particulate area grid emissions for Wood County in 1985

SECTION VII

RECOMMENDATIONS

Based on the results of this study, a number of recommendations can be made to improve the procedures and data utilized to calculate the ambient TSP air quality. The first problem which must be attacked is the point source inventory. In terms of completeness, OEPA seems to have included a significant number of the small point sources, but the accuracy of the data in the file is somewhat questionable. It would be desirable to verify all point sources in the file to insure that all data pertinent to air quality modeling is correct.

The second problem which needs attention is the area source inventory. It is desirable to have a small amount of area emissions to allocate since area sources are allocated by a scheme whose accuracy is questionable. For most counties, the major source of TSP area source emissions is motor vehicles. Under the CAASE program, these emissions are allocated by population or inverse population density. It would be preferable to allocate vehicle emissions to the grid square base on VMT in the grid square. This data may be available from the local transporation agencies in the form vehicle mileage maps. Additionally, an inventory of fugitive emissions sources should be compliled and allocated to the appropriate grid square. The major categories that should be included are: dirt roads, construction, land tilling, and paved roadway emissions.

After the emission inventory was updated, the TSP air quality monitors would have to be evaluated with respect to the quality of the data, the siting of the monitor, and the suitability of the monitors for model calibration. Before any air quality data is utilized for model calibration, it is necessary that the data be verified to ascertain that no transciption errors have occurred in getting the air quality data into the SAROAD system. Additionally, site location should be checked for accuracy. Each monitor site should be evaluated to determine whether it adequately represents the ambient TSP level. Because of poor siting, a monitor might be either sheltered from sources, or in a "street canyon" environment where normal wind dispersion does not occur. Additionally, if a monitor is near a large fugitive source, it may not be desirable to use this station, since fugitive sources are included in area sources, and as such are uniformly spread throughout the grid, not concentrated in a small area.

The last problem which should be addressed is the ability of MCDM to adequately predict TSP levels. MCDM does not currently contain any mechanism to handle washout, deposition, or settling. Models which take these mechanisms into account are being developed. It is not felt that the model limitations are currently the major problem since good correlations have been reported with this model. The major sources of improvement that can be implemented at this time is a complete and accurate emission inventory.

SECTION VIII

REFERENCES

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2. Guide for Compiling a Comprehensive Emission Inventory (Second Edition). U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina. December 1974.

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4. User's Guide for the Climatological Dispersion Model. National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency. EPA-R4-73-024. December 1973.

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6. Highway Statistics. U.S. Department of Transportation, Federal Highway Administration. Washington, D.C. 1974.

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8. Detailed Housing Characteristics in Census of Housing 1970. HC-B Series. U.S. Department of Commerce, Bureau of the Census, Washington, D.C. 1970.

9. County Business Patterns. U.S. Department of Commerce, Bureau of the Census, Washington, D.C. 1973.

10. Waterborne Commerce of the United States. U.S. Department of the Army, Corp. of Engineers, New Orleans, Louisiana. 1974.

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12. Military Air Traffic Activity Report, Calendar Year 1974. U.S. Department of Transportation, Federal Aviation Administration, Washington, D.C.

13. Current Population Reports. U.S. Department of Commerce, Bureau of the Census. Series P-26.

14. Cowherd, C. C., et al. Emissions Inventory of Agricultural Tilling, Unpaved Roads and Airstrips, and Construction Sites. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina. Report Number EPA-450/3-74-085. November 1974.

15. Compilation of Air Pollutant Emission Factors. U.S. Environmental Protection Agency. Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina. February 1976.

APPENDIX A

PROGRAM "EXTRACT" AND SAMPLE OUTPUT

```
FORTRAN IV G1  RELEASE 2.0            MAIN            DATE = 76295        14/54/27             PAGE 0001

                  C
                  C       PROGRAM: EXTRACT
                  C
                  C       THIS PROGRAM EXTRACTS A NUMBER OF PARAMETER FROM THE NEDS POINT
                  C       SOURCE FILE, AND REFORMATS THE DATA FOR INPUT TO CDM AND AQDM.
                  C       ADDITIONALLY THE TOTAL FUEL BURNED BY THE POINT SOURCES IS PRINTED
                  C       BY FUEL AND BOILER TYPE.
                  C
                  C       FUEL TOTALS ARE FOR SCCI WHICH IS EXTERNAL COMBUSTION.
                  C
                  C       THE SCC III PUNCHED ON THE STRATEGY TAPE IS THAT
                  C       OF THE LAST CARD 6 WHEN THERE ARE MULTIPLE CARD 6.
                  C
  0001                    REAL*4 MTRCNV
  0002                    REAL*8 DATA,CYCLE,CODE
  0003                    INTEGER SCCI,SCCII,SCCIII,SCCIV,PAGE
  0004                    DIMENSION DATA(7),TFUEL(3,14),STATE(5),COUNTY(5),TFUEL2(3,14),
                         1PCTSO2(14),TEMP1(4,3),NAMEB(3,14),NAMEI(3,9),ASH(3)
  0005                    DATA NAMEB/'ANTH','RACI','TE  ','BITU','MINO','US  ',
                         1'LIGN','ITE ','    ','RESI','DUAL',' OIL','DIST','ILLA','TE  ',
                         2'NATU','RAL ','GAS ','PROC','ESS ','GAS ','COKE','    ','    ',
                         3'WOOD','/BAR','K   ','UNDE','FINE','D   ','BAGA','SSE ','    ',
                         4'SOLI','D WA','STE ','LIQU','ID W','ASTE','OTHE','R   ','    '/
  0006                    DATA NAMEI/'DIST','ILLA','TE  ','NATU','RAL ','GAS ',
                         1'GASO','LINE','    ','DIES','EL  ','    ','RESI','DUAL',' OIL',
                         2'JET ','FUEL','    ','CRUD','E OI','L   ','PROC','ESS ','GAS ',
                         3'OTHE','R   ','    '/
                  C
                  C       SET UP DEVICE NUMBERS.
                  C       (5) = CARD READER
                  C       (6) = LINE PRINTER
                  C       (7) = CARD PUNCH
                  C       (9) = TAPE WITH NEDS POINT SOURCE DATA
                  C       (4) = OUTPUT TAPE WITH DATA FOR STRATEGIES PROGRAM
                  C
  0007                    IRD=5
  0008                    IPR=6
  0009                    IPU=7
  0010                    ITPI=9
  0011                    ITPO=4
  0012                    ISMPT=8
                  C
                  C       DEFINE REQUIRED CONSTANTS.
                  C
  0013                    PI=3.14159
  0014                    MTRCNV=0.3048
  0015                    SA=0.0
  0016                    SIDE=0.0
```

```
FORTRAN IV G1  RELEASE 2.0           MAIN              DATE = 76295        14/54/27              PAGE 0002
      0017              235 DO 111 I=1,14
      0018                  PCTSO2(I)=0.0
      0019                  DO 121 J=1,3
      0020                  TFUEL(J,I)=0.0
      0021                  TFUEL2(J,I)=0.0
      0022              121 CONTINUE
      0023              111 CONTINUE
      0024                  ASH(1)=0.0
      0025                  ASH(2)=0.0
      0026                  ASH(3)=0.0
                    C
                    C       SET COUNTERS AND FLAGS.
                    C
      0027                  TSO2=0.0
      0028                  ESO2=0.0
      0029                  TPART=0.0
      0030                  EPART=0.0
      0031                  ICNT=0
      0032                  ICNTS=0
      0033                  PAGE=1
      0034                  LINE=0
      0035                  IFLAG=0
      0036                  IEOF=0
                    C
                    C       READ THE STATE AND COUNTY NAME, THE STATE COUNTY CODE
                    C       AND LEVEL OF POLLUTANTS WHICH MUST BE EXCEEDED TO BE CONSIDERED
                    C       A POINT SOURCE. (TONS/DAY)
                    C
      0037                  READ(IRD,10,END=245) STATE,COUNTY,CODE,SO2L,PARTL
      0038               10 FORMAT (10A4,4X,A6,2F10.0)
      0039                  IF(SO2L.LE.0.0) GO TO 245
      0040                  WRITE(IPR,100) PAGE
      0041              100 FORMAT(1H1,//,T124,'PAGE',I3)
      0042                  WRITE(IPR,110) COUNTY,STATE,SO2L,PARTL
      0043              110 FORMAT (////////////////,T50,'FOR THE COUNTY OF ',5A4,
                           1//,T50,'IN THE STATE OF ',5A4,/////,T35,'THIS IS A SUMMARY OF ALL
                           2SOURCES POTENTIALLY EMITTING MORE THAN',//,T38,F5.0,' TONS OF SO2
                           3  OR ',F5.0,' TONS OF PARTICULATES PER YEAR')
      0044                  PAGE=PAGE+1
      0045                  WRITE(IPR,180) PAGE
      0046              180 FORMAT (1H1,//,T124,'PAGE',I3,/,T06,'STATE',T13,'PLANT',T29,'NAME
                           1ADDRESS',T64,'KM E',T71,'KM N',T80,'SO2',T87,'PART',
                           2T94,'HEIGHT',T104,'EXIT',T112,'DIAM',T118,'TEMP',T19,'EMIS',/,
                           3T06,'COUNTY',T15,'ID',T78,'TONS/YR',T86,'TONS/YR',T94,'METERS',
                           4T104,'M/SEC',T111,'METERS',T120,'C',T20,'PT',/)
                    C
                    C       READ THE STATE COUNTY AND PLANT CODES, AND THE PLANT NAME.
                    C
```

```
0047             105 READ(ITPI,20,END=205) DATA,ICRD
0048              20 FORMAT (A5,3X,A4,8X,5A8,18X,I1)
0049                 IF(ICRD.NE.1) GO TO 185
0050                 IF(DATA(1).NE.CODE) GO TO 215
0051                 READ(ITPI,70) ICRD
0052                 BACKSPACE ITPI
0053                 IF(ICRD.NE.1) GO TO 115
0054                 GO TO 105
               C
               C     READ THE COORDINATES, STACK HEIGHT, DIAMETER, TEMPERATURE, FLOW
               C     RATE AND PLUME HEIGHT FOR THE EMISSION POINT.
               C
0055             115 IC6=0
0056                 DO 141 I=1,4
0057                 DO 151 J=1,3
0058                 TEMP1(I,J)=0.0
0059             151 CONTINUE
0060             141 CONTINUE
0061             275 READ(ITPI,70,END=205) ICRD
0062                 IF(ICRD.EQ.7) GO TO 275
0063                 BACKSPACE ITPI
0064                 READ(ITPI,30,END=205) NPT,ISIC,IPP,X,Y,STHT,DIAM,TEMP,FLOW,PHT,
                    1ICRD
0065              30 FORMAT (13X,I2,2X,I4,A2,F4.1,F5.1,F4.0,F3.1,F4.0,F7.0,F4.0,T80,I1)
0066                 IF(ICRD.NE.2) GO TO 185
               C
               C     IF THE STACK HEIGHT IS ZERO, USE THE PLUME HEIGHT FOR THE
               C     STACK HEIGHT.
               C
0067                 IF(STHT.LE.0.0) STHT=PHT
0068                 ICNT=ICNT+1
               C
               C     CONVERT MEASUREMENTS TO METRIC UNITS.
               C
0069                 STHT=STHT*MTRCNV
0070                 DIAM=DIAM*MTRCNV
0071                 FLOW=FLOW*(MTRCNV**3)/60.0
0072                 STVEL=0.0
0073                 IF(DIAM.LE.0.0) GO TO 125
0074                 STVEL=FLOW/(PI*(DIAM/2.)**2)
               C
               C     CONVERT TEMPERATURE TO DEGREES CENTIGRADE
               C
0075             125 TEMPK=5.0*(TEMP-32.0)/9.0
               C
               C     READ THE BOILER CAPACITY.
               C
0076                 READ(ITPI,40,END=205) BOILER,CNTRLP,CNTRLS,ICRD
```

```
 0077         40 FORMAT (17X,F5.0,T53,2F3.1,T80,I1)
 0078            IF(ICRD.NE.3) GO TO 185
           C
           C     READ THE SEASONAL OPERATING CYCLE AND THE YEARLY EMISSION OF
           C     PARTICULATES AND SO2 IN TONS/YEAR.
           C
 0079            READ(ITPI,50,END=205) CYCLE,PART,SO2,ICRD
 0080         50 FORMAT (17X,A8,5X,F7.0,F7.0,T80,I1)
 0081            PPART=PART/((100-CNTRLP)/100)
 0082            PSO2=SO2/((100-CNTRLS)/100)
 0083            IF(ICRD.NE.4) GO TO 185
 0084            TSO2=TSO2+SO2
 0085            TPART=TPART+PART
           C
           C     CHECK IF THE EMMISSIONS ARE TO BE CONSIDERED A POINT SOURCE.
           C
 0086            IF(PSO2.LT.SO2L.AND.PPART.LT.PARTL) IFLAG=1
           C
           C     SKIP CARD 5.
           C
 0087        285 READ(ITPI,70,END=205) ICRD
 0088            IF(ICRD.EQ.5.OR.ICRD.EQ.7) GO TO 285
 0089            BACKSPACE ITPI
           C
           C     READ THE SCC CODES FOR THIS PROCESS, THE ANNUAL FUEL CONSUMPTION
           C     AND THE SULFUR CONTENT OF THE FUEL.
           C
 0090        135 IC6=IC6+1
 0091            READ(ITPI,60,END=205) SCCI,SCCII,SCCIII,SCCIV,
                1FUEL,PSO2,PASH,HTCAP,ICRD
 0092         60 FORMAT (17X,I1,I2,I3,I2,F7.0,7X,F3.2,F3.1,F5.0,T80,I1)
 0093            IF(ICRD.NE.6) GO TO 185
 0094            IF(IC6.GT.3) IC6=4
 0095            IF(SCCI.EQ.1.OR.SCCI.EQ.3.AND.SCCII.EQ.90)
                1TEMP1(IC6,1)=SCCIII
 0096            TEMP1(IC6,2)=FUEL
 0097            TEMP1(IC6,3)=PSO2
 0098            IF(SCCI-2)255,265,255
 0099        265 IF(SCCII.GT.3) SCCII=1
 0100            IF(SCCIII.GT.8) SCCIII=9
 0101            IF(SCCII.EQ.1.AND.SCCIII.GT.2) SCCIII=SCCIII+1
 0102            IF(SCCII.EQ.3) SCCIII=4
 0103                       TFUEL2(SCCII,SCCIII)=TFUEL2(SCCII,SCCIII)+ FUEL
 0104            GO TO 225
           C
           C     IF THE PROCESS IS A BOILER OR INPROCESS FUEL, STORE THE FUEL,
           C     SULFUR  AND ASH CONTENT.
           C
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  0105          255 IF(SCCI.GT.3) GO TO 225
  0106              IF(SCCI.EQ.3.AND.SCCII.NE.90) GO TO 225
  0107              IF(SCCII.GT.3) SCCII=2
  0108              IF(SCCIII.GT.13) SCCIII=14
  0109              PCTSO2(SCCIII)=PCTSO2(SCCIII)+FUEL*PSO2
  0110              IF(SCCIII.LE.3) ASH(SCCIII)=ASH(SCCIII)+FUEL*PASH
  0111              TFUEL(SCCII,SCCIII)=TFUEL(SCCII,SCCIII)+FUEL
                C
                C     CHECK THE FOLLOWING NEDS CARDS, AND DO THE FOLLOWING.
                C        CARD 1, BACKSPACE AND GO TO 105
                C        CARD 2, BACKSPACE AND GO TO 115
                C        CARD 6, BACKSPACE AND GO TO 135
                C        CARD 7, SKIP
                C        CARD 3,4,5 WILL PRODUCE A DIAGNOSTIC.
                C
  0112          225 READ(ITPI,70,END=305) ICRD
  0113           70 FORMAT (T80,I1)
  0114              IF(ICRD.EQ.7) GO TO 225
  0115              IF(ICRD.EQ.6) GO TO 195
  0116              GO TO 295
  0117          305 IEOF=1
                C
                C     PUNCH THE DATA REQUIRED FOR CDM AND AQDM, PRINT THE DATA AND
                C     GENERATE THE STRATEGY DATA TAPE.
                C
  0118          295 IF(IFLAG.EQ.0) GO TO 175
  0119              IF(SO2.GT.0.0.OR.PART.GT.0.0)
                   1WRITE(ISMPT,220) DATA(1),DATA(2),NPT,X,Y,SO2,PART
  0120          220 FORMAT (A6,2X,A4,2X,I4,2X,F7.1,F8.1,2F8.0)
  0121              GO TO 155
  0122          175 ESO2=ESO2+SO2
  0123              EPART=EPART+PART
  0124              WRITE(IPR,130) (DATA(I),I=1,2),NPT,(DATA(I),I=3,7),X,Y,SO2,PART,
                   1STHT,STVEL,DIAM,TEMPK,IC6
  0125          130 FORMAT (T06,A6,1X,A4,I4,2X,5A8,F6.1,F7.1,2F8.0,F7.1,3F8.1,I3)
                C
                C     CONVERT ANNUAL EMISSIONS TO GMS/SEC
                C
  0126              PART=PART*0.028792
  0127              SO2=SO2*0.028792
  0128              WRITE(IPU,120) X,Y,SIDE,SO2,PART,STHT,DIAM,STVEL,TEMPK,SA,
                   1DATA(2)
  0129          120 FORMAT (F6.1,2F7.1,2F8.3,F7.1,F5.1,F7.1,F7.1,F5.0,4X,A4,1HP)
  0130              WRITE(IPU,900) (DATA(I),I=1,2),NPT,(DATA(I),I=3,7)
  0131          900 FORMAT (T06,A6,1X,A4,I4,2X,5A8)
  0132              ICNTS=ICNTS+1
  0133              LINE=LINE+1
  0134              IF(LINE.LT.50) GO TO 145
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            PAGE=PAGE+1
            WRITE(IPR,180) PAGE
            LINE=0
        145 CONTINUE
        155 IFLAG=0
            IF(IEOF.EQ.1) GO TO 205
        195 BACKSPACE ITPI
            IF(ICRD.EQ.6) GO TO 135
            IF(ICRD.GT.2) GO TO 165
            IF(ICRD-1)105,105,115
        185 BACKSPACE ITPI
        165 READ(ITPI,80,END=205) DATA
         90 FORMAT (7A8)
            WRITE(IPR,140) DATA
        140 FORMAT ( //,T40,'THE FOLLOWING DATA CARD IS OUT OF SEQUENCE',
           1//,T40,7A8,//)
      C
      C     END OF FILE WAS REACHED, PRINT TOTAL NUMBER OF SOURCES ON THE
      C     TAPE AND THE NUMBER OF SOURCES WHICH WERE CONSIDERED POINT SOURCES
      C     ALSO PRINT FUELS USAGE OF POINT SOURCES.
      C
        205 PAGE=PAGE+1
            WRITE(IPR,100) PAGE
            WRITE(IPR,210) COUNTY
        210 FORMAT(T50,' COUNTY OF  ',5A4,/)
            WRITE(IPR,150) ICNT,SO2L,PARTL,ICNTS
        150 FORMAT ( /,T40,'TOTAL EMISSION POINTS ON THE TAPE',I5,//,
           1T40,'TOTAL SOURCES OF SO2 GREATER THAN ',F5.1,' TONS/YEAR',
           1' AND',/,T49,'TSP SOURCES GREATER THAN ',F5.1,' TONS/YEAR IS ',I4,
           2//)
      C
      C     CALCULATE THE AVERAGE SULFUR CONTENT FOR EACH FUEL TYPE.
      C
            DO 131 I=1,14
            TT=TFUEL(1,I)+TFUEL(2,I)+TFUEL(3,I)
            IF(TT.LE.0.0) GO TO 131
            PCTSO2(I)=PCTSO2(I)/TT
            IF(I.LE.3) ASH(I)=ASH(I)/TT
        131 CONTINUE
            PCTS  =ESO2*100.0/TSO2
            PCTPAR=EPART*100.0/TPART
            WRITE(IPR,190) TSO2,TPART,ESO2,PCTS  ,EPART,PCTPAR
        190 FORMAT (T40,'TOTAL SO2 EMISSIONS =',F9.0,' TONS/YR',//,
           1T40,'TOTAL TSP EMISSIONS =',F9.0,' TONS/YR',//
           2T40,'SO2 EMISSIONS FROM THE SELECTED POINTS IS',F9.0,' TONS/YR',/,
           3T40,'PERCENT OF TOTAL SO2 EMISSIONS',F6.1,'%',//,
           4T40,'TSP EMISSIONS FROM THE SELECTED POINTS IS',F9.0,' TONS/YR',/,
           5T40,'PERCENT OF TOTAL TSP EMISSION',F6.1,'%',//)
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FORTRAN IV G1  RELEASE 2.0            MAIN              DATE = 75295         14/54/27             PAGE 0007

  0166                WRITE(IPR,160) ((NAMEB(J,I),J=1,3),
                     1           I,PCTSO2(I),ASH(I),(TFUEL(J,I),J=1,3),I=1,3),((NAMEB(J,I)
                     2,J=1,3),           I,PCTSO2(I),(TFUEL(J,I),J=1,3),I=4,14)
  0167            160 FORMAT (//,T50,'FUEL BURNED IN BOILERS AND IN PROCESS FUEL',//,T21
                     1,    'FUEL'      ,T50,'ELECTRICAL GENERATION',T80,'INDUSTRIAL',
                     2T100,'COMMERCIAL INSTITUTIONAL',//,
                     303(T18,3A4,T32,I3,T37,F4.1,F6.1,T55,F10.0,T78,F10.0,T106,F10.0,/),
                     411(T18,3A4,T32,I3,T37,F4.1,T55,F10.0,T73,F10.0,T106,F10.0,/))
  0168                WRITE(IPR,200) ((NAMEI(J,I),J=1,3),
                     1                  I,(TFUEL2(J,I),J=1,3),I=1,9)
  0169            200 FORMAT (//,T56,'TOTAL FUEL BURNED BY INTERNAL COMBUSTION',//,T21,
                     1    'FUEL'      ,T50,'ELECTRICAL GENERATION',T80,'INDUSTRIAL',
                     2T100,'COMMERCIAL INSTITUTIONAL',//,
                     39(T18,3A4,T32,I3,T55,F10.0,T78,F10.0,T106,F10.0,/))
  0170                GO TO 235
  0171            215 WRITE(IPR,230) DATA(1),CODE
  0172            230 FORMAT (//,T20,'STATE COUNTY CODE OF THIS DATA IS',A8,//,
                     1T20,'STATE COUNTY CODE REQUIRED IS',A8)
  0173            245 CALL EXIT
  0174                END
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                                                                                PAGE  1

                          FOR THE COUNTY OF BUTLER
                          IN THE STATE OF OHIO

                THIS IS A SUMMARY OF ALL SOURCES POTENTIALLY EMITTING MORE THAN
                   25. TONS OF SO2   OR   25. TONS OF PARTICULATES PER YEAR
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STATE COUNTY	PLANT ID	EMIS PT	PLANT NAME		UTM E	UTM N	SO2 TONS/YR	PART TONS/YR	HEIGHT METERS	EXIT M/SEC	DIAM METERS	TEMP C	
360900	5001	1	CRYSTAL TISSUE COMPANY	45042	722.6	4373.7	322.	27.	19.5	14.0	1.3	175.7	2
360900	5017	1	WALTER L. FOLLMER INC.	45014	707.1	4355.2	0.	47.	12.2	7.3	2.0	135.0	1
360900	5016	1	VALLEY ASPHALT CORPORATION	45061	705.9	4354.1	0.	112.	9.8	0.0	1.2	121.1	1
360900	5018	2	VALLEY ASPHALT CORPORATION	45061	703.2	4354.1	0.	34.	9.1	10.1	1.8	121.1	1
360900	5020	1	ARMREL CONSTRUCTION CO	45042	721.2	4370.2	0.	57.	9.1	0.0	3.0	93.3	1
360900	5021	1	RUMPKE INC.	45051	702.5	4355.3	3.	104.	19.5	0.0	3.7	-17.8	1
360900	5021	2	RUMPKE INC.	45051	702.5	4355.3	3.	109.	0.0	0.0	0.0	-17.8	1
360900	5022	1	AMERICAN MATERIALS CORP 731	45042	725.0	4376.3	0.	2.	17.4	27.9	0.5	10.0	1
360900	5002	1	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	724.5	4374.3	31.	45.	56.6	4.7	2.4	237.9	1
360900	5002	2	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	724.5	4374.3	31.	132.	56.6	4.7	2.4	287.9	1
360900	5002	3	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	724.5	4374.3	255.	371.	19.8	12.5	1.8	218.3	1
360900	5002	4	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	724.5	4374.3	253.	380.	19.8	12.6	1.8	218.3	1
360900	5002	24	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	724.3	4373.7	55.	50.	26.2	7.5	2.1	232.2	3
360900	5002	23	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	724.8	4373.7	59.	52.	26.2	7.5	2.1	232.2	3
360900	5002	22	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	724.8	4373.7	56.	46.	26.2	7.5	2.1	232.2	3
360900	5002	21	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	724.8	4373.7	49.	35.	26.2	7.5	2.1	232.2	3
360900	5002	20	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	725.2	4373.2	0.	65.	21.3	8.0	2.7	48.9	1
360900	5002	19	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	724.5	4374.3	27.	5.	52.4	13.1	3.4	287.8	3
360900	5002	18	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	724.5	4374.3	39.	5.	52.4	13.1	3.4	287.8	3
360900	5002	17	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	724.5	4374.3	23.	5.	52.4	13.1	3.4	287.8	3
360900	5002	5	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	725.2	4373.2	1350.	0.	0.0	0.0	0.0	-17.8	1
360900	5002	16	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	725.2	4373.2	0.	179.	64.3	4.5	5.2	51.7	1
360900	5002	15	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	725.2	4373.2	0.	48.	70.1	0.9	7.3	71.1	1
360900	5002	14	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	725.2	4373.2	0.	48.	70.1	0.9	7.3	71.1	1
360900	5002	13	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	725.2	4373.2	0.	47.	42.7	15.3	2.3	90.0	1
360900	5002	12	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	725.2	4373.2	0.	47.	42.7	14.9	2.3	90.0	1
360900	5002	11	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	725.2	4373.2	0.	47.	42.7	14.9	2.3	90.0	1
360900	5002	10	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	725.2	4373.2	0.	47.	42.7	14.9	2.3	90.0	1
360900	5002	9	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	725.2	4373.2	0.	47.	42.7	14.9	2.3	90.0	1
360900	5002	8	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	725.2	4373.2	0.	47.	42.7	14.9	2.3	90.0	1
360900	5002	6	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	725.2	4373.2	0.	61.	36.5	32.2	4.3	93.3	1
360900	5002	7	ARMCO STEEL CORP MIDDLETOWN WORKS	45042	725.2	4373.2	0.	1.	12.2	0.0	0.0	21.1	1
360900	5011	1	MIDDLETOWN PAPERBOARD CO	45042	723.0	4375.3	232.	30.	25.9	5.7	1.5	176.7	1
360900	5003	1	DIAMOND INTERNATIONAL CORP MILL 2	45042	724.5	4371.4	453.	109.	20.7	15.9	1.4	121.1	2
360900	5025	1	MORAINE MATERIALS	45042	723.4	4372.5	0.	2.	19.8	1.3	0.5	21.1	1
360900	5004	1	SORG PAPER CO	45042	723.2	4377.3	214.	3.	61.0	1.8	3.7	176.7	2
360900	5004	2	SORG PAPER CO	45042	723.2	4377.3	315.	1245.	61.0	1.8	3.7	176.7	2
360900	5004	3	SORG PAPER CO	45042	723.2	4377.3	253.	10.	61.0	1.8	3.7	176.7	2
360900	5004	4	SORG PAPER CO	45042	723.2	4377.3	741.	30.	61.0	4.1	3.7	176.7	2
360900	5006	3	DIAMOND INTERNATIONAL CORP MILL 1	45042	722.8	4377.2	103.	33.	15.5	13.1	1.4	287.8	1
360900	5007	1	DICK'S CREEK STATION-CG&E	45042	725.5	4371.5	96.	17.	19.2	28.1	8.4	371.1	1
360900	5026	1	TRIASCO CORPORATION	45042	723.5	4375.5	0.	15.	7.9	3.9	1.8	65.6	1
360900	5027	1	MT PLEASANT BLACKTOPPING CO INC	45014	714.3	4356.1	0.	55.	10.7	0.0	1.2	121.1	1
360900	5012	1	FISHER BODY DIV GMC	45012	712.0	4359.9	45.	15.	21.3	9.3	1.5	271.1	1
360900	5012	2	FISHER BODY DIV GMC	45012	712.0	4359.9	54.	17.	21.3	9.3	1.5	271.1	1
360900	5012	3	FISHER BODY DIV GMC	45012	712.0	4359.9	43.	15.	21.3	9.3	1.5	271.1	1
360900	5029	1	STEEL ABRASIVES INC	45014	713.1	4358.1	0.	1.	13.1	0.0	1.9	148.9	1
360900	5030	1	AMERICAN CYANAMID CO	45012	712.0	4359.3	1502.	0.	45.7	7.9	0.9	71.1	1
360900	5031	1	HAMILTON ALLIED CORP HAMILTN FOUND	45011	711.2	4351.7	0.	57.	13.7	0.0	1.2	-17.8	1
360900	5031	2	HAMILTON ALLIED CORP HAMILTN FOUND	45011	711.2	4351.7	0.	172.	15.5	0.0	2.4	-17.8	1

STATE COUNTY	PLANT ID	EMIS PT	NAME SOURCE		UTM E	UTM N	SO2 TONS/YR	PART TONS/YR	HEIGHT METERS	EXIT M/SEC	DIAM METERS	TEMP C	
360900	5032	1	M P DEUSCHER CO	45011	710.4	4362.7	0.	76.	15.2	4.3	1.7	65.6	1
360900	5035	1	GRAY-IRON FOUNDRY CORP	45011	710.3	4364.3	0.	61.	15.2	1.3	1.5	315.6	1
360900	5008	1	HAMILTN MIL-CHAMP PAPERS DIV CHAMP	45013	709.9	4354.5	125.	135.	46.6	3.5	3.0	246.1	1
360900	5008	2	HAMILTN MIL-CHAMP PAPERS DIV CHAMP	45013	709.9	4354.6	96.	97.	46.6	3.5	3.0	246.1	1
360900	5008	3	HAMILTN MIL-CHAMP PAPERS DIV CHAMP	45013	709.9	4354.6	143.	154.	46.0	3.5	3.0	246.1	1
360900	5008	4	HAMILTN MIL-CHAMP PAPERS DIV CHAMP	45013	709.9	4354.6	126.	135.	46.3	3.8	2.7	246.1	1
360900	5008	5	HAMILTN MIL-CHAMP PAPERS DIV CHAMP	45013	709.9	4354.5	154.	157.	46.0	5.8	2.7	246.1	1
360900	5008	6	HAMILTN MIL-CHAMP PAPERS DIV CHAMP	45013	709.9	4354.5	91.	95.	67.1	4.4	3.4	190.6	1
360900	5008	7	HAMILTN MIL-CHAMP PAPERS DIV CHAMP	45013	709.9	4354.5	94.	102.	67.1	2.7	3.4	190.6	1
360900	5008	8	HAMILTN MIL-CHAMP PAPERS DIV CHAMP	45013	709.9	4354.5	2030.	2494.	67.1	13.4	3.4	190.6	1
360900	5008	9	HAMILTN MIL-CHAMP PAPERS DIV CHAMP	45013	710.3	4354.9	75.	43.	22.9	7.5	1.7	301.7	1
360900	5008	10	HAMILTN MIL-CHAMP PAPERS DIV CHAMP	45013	710.3	4354.9	43.	28.	22.9	7.6	1.7	301.7	1
360900	5038	1	GEO R TURNBULL INC	45011	711.0	4363.4	0.	17.	0.0	0.0	1.2	-17.8	1
360900	5009	1	MUNICIPAL POWER PLANT	45011	710.5	4355.2	171.	44.	39.9	6.4	2.4	176.7	1
360900	5009	2	MUNICIPAL POWER PLANT	45011	710.5	4355.2	217.	73.	39.9	2.0	2.4	176.7	1
360900	5009	3	MUNICIPAL POWER PLANT	45011	710.5	4355.2	644.	400.	50.6	12.6	2.3	176.7	1
360900	5040	1	WALTER L FOLLMER INC	45011	712.3	4357.4	0.	58.	13.4	0.0	1.8	148.9	1
360900	5010	10	ARMCO STEEL CORP HAMILTON PLANT	45012	712.4	4357.2	21.	27.	36.9	4.8	4.6	278.3	1
360900	5010	8	ARMCO STEEL CORP HAMILTON PLANT	45012	712.4	4357.2	0.	6.	50.3	7.1	2.9	136.7	1
360900	5010	7	ARMCO STEEL CORP HAMILTON PLANT	45012	712.4	4357.2	0.	8.	50.3	7.1	2.9	136.7	1
360900	5010	1	ARMCO STEEL CORP HAMILTON PLANT	45012	712.5	4367.4	710.	625.	0.0	0.0	0.0	-17.8	1
360900	5010	2	ARMCO STEEL CORP HAMILTON PLANT	45012	712.5	4357.4	222.	193.	0.0	0.0	0.0	-17.8	1
360900	5010	3	ARMCO STEEL CORP HAMILTON PLANT	45012	712.5	4367.4	376.	328.	0.0	0.0	0.0	-17.8	1
360900	5010	4	ARMCO STEEL CORP HAMILTON PLANT	45012	712.5	4357.4	393.	342.	0.0	0.0	0.0	-17.8	1
360900	5010	6	ARMCO STEEL CORP HAMILTON PLANT	45012	712.4	4367.2	0.	26.	40.8	19.6	1.0	10.0	1
360900	5010	5	ARMCO STEEL CORP HAMILTON PLANT	45012	712.5	4367.4	0.	277.	30.5	0.0	4.3	93.3	1
360900	5042	1	AMERICAN MATERIALS CORP 710	45011	712.2	4357.8	0.	90.	0.0	0.0	0.0	-17.8	1
360900	5043	1	DON S CISLE CONTRACTOR INC	45011	712.2	4357.5	0.	34.	14.0	4.2	4.1	65.6	1
360900	5043	2	DON S CISLE CONTRACTOR INC	45011	712.2	4357.5	0.	8.	11.6	1.3	3.0	60.0	1
360900	5016	1	MIAMI UNIVERSITY	45056	694.3	4375.4	124.	132.	53.3	0.0	2.6	326.7	1
360900	5016	2	MIAMI UNIVERSITY	45056	694.3	4375.4	94.	68.	53.3	0.0	2.6	326.7	1
360900	5016	3	MIAMI UNIVERSITY	45056	694.3	4375.4	98.	65.	53.3	0.0	2.6	326.7	1

```
           COUNTY OF BUTLER

    TOTAL EMISSION POINTS IN THE TAPE 1[illegible]

    TOTAL SOURCES OF SO2 GREATER THAN  25.  TONS/YEAR AND
              TSP SOURCES GREATER THAN  25.0 TONS/YEAR IS   96.

    TOTAL SO2 EMISSIONS =    12965. TONS/YR

    TOTAL TSP EMISSIONS =    11110. TONS/YR

    SO2 EMISSIONS FROM THE SELECTED POINTS IS    12749. TONS/YR
    PERCENT OF TOTAL SO2 EMISSIONS  [illegible]

    TSP EMISSIONS FROM THE SELECTED POINTS IS    11090. TONS/YR
    PERCENT OF TOTAL TSP EMISSION  99.[illegible]


                 FUEL BURNED IN BOILERS AND IN PROCESS FUEL

     FUEL                       ELECTRICAL GENERATION     INDUSTRIAL       COMMERCIAL INSTITUTIONAL

  ANTHRACITE     1   0.0   0.9            0.                 0.                     0.
  BITUMINOUS     2   0.8   9.5        71692.            341910.                 23000.
  LIGNITE        3   0.0   0.0            0.                 0.                     0.
  RESIDUAL OIL   4   1.0                  0.              3571.                   256.
  DISTILLATE     5   0.3                401.              3710.                     0.
  NATURAL GAS    6   0.0               1413.              2345.                     0.
  PROCESS GAS    7   0.0                  0.             66339.                     0.
  COKE           8   0.0                  0.                 0.                     0.
  WOOD/BARK      9   0.0                  0.                 0.                     0.
  UNDEFINED     10   0.0                  0.                 0.                     0.
  BAGASSE       11   0.0                  0.                 0.                     0.
  SOLID WASTE   12   0.0                  0.                 0.                     0.
  LIQUID WASTE  13   0.0                  0.                 0.                     0.
  OTHER         14   0.0                  0.                 0.                     0.


                   TOTAL FUEL BURNED BY INTERNAL COMBUSTION

     FUEL                       ELECTRICAL GENERATION     INDUSTRIAL       COMMERCIAL INSTITUTIONAL

  DISTILLATE     1                     5767.                 0.                     0.
  NATURAL GAS    2                        0.                 0.                     0.
  GASOLINE       3                        0.                 0.                     0.
  DIESEL         4                        0.                 0.                     0.
  RESIDUAL OIL   5                        0.                 0.                     0.
  JET FUEL       6                        0.                 0.                     0.
  CRUDE OIL      7                        0.                 0.                     0.
  PROCESS GAS    8                        0.                 0.                     0.
  OTHER          9                        0.                 0.                     0.
```

APPENDIX B

PROGRAM LISTING AND SAMPLE OUTPUT OF "ALLO"

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FORTRAN IV G1  RELEASE 2.0            MAIN               DATE = 76266         10/36/06              PAGE 0001

                 C         DATA SET PTALLU     AT LEVEL 004 AS OF 09/22/76
 0001                  DIMENSION STATE(3),COUNTY(3)                                          00001
 0002                  REAL INITUM,IDOIL,IROIL,INGAS,INACOL,INBCOL,INDOIL,INROIL,INGAS,      00002***
                      1NATGR,NATGCI,NATGI                                                    00003
 0003                  ZERO=0.0                                                              00004
 0004                  IRD=5                                                                 00005
 0005                  IPR=6                                                                 00006
 0006                  IPU=7                                                                 00007
                 C                                                                           00008
                 C     READ STATE NAME, EPA STATE CODE, AQCR CODE, AND YEAR OF RECORD,       00009
                 C     TOTAL POPULATION, COM/INST EMPLOYMENT, INDUSTRIAL EMPLOYMENT,         00010
                 C     AND AUTOMOBILE AND TRUCK REGISTRATION.                                00011
                 C                                                                           00012
 0007              115 READ(IRD,100) STATE,ISTATE,AQCR,IYR,SPOP,SCIEMP,SINEMP,               00013
                      1SREGA,SREGT                                                           00014
 0008              100 FORMAT (3A4,1X,A2,1X,A4,3X,A2,5X,5F10.0)                              00015
 0009                  IF(SPOP.EQ.0.0) GO TO 125                                             00016
 0010                  WRITE(IPR,200) STATE,SPOP,SCIEMP,SINEMP,SREGA,SREGT                   00017
 0011              200 FORMAT (1H1,///,T45,'AREA EMISSION INVENTORY FOR ',                   00018
                      13A4,//,T50,'TOTAL POPULATION = ',F10.0,//T40,                         00019
                      2'TOTAL COMMERCIAL/INSTITUTIONAL EMPLOYMENT =',F10.0,//T45,            00020
                      3'TOTAL INDUSTRIAL EMPLOYMENT = ',F10.0,//,                            00021
                      4T49,'AUTOMOBILE REGISTRATION',F10.0,//,                               00022
                      5T51,'TRUCK REGISTRATION',F10.0,//)                                    00023
                 C                                                                           00024
                 C                                                                           00025
                 C      READ DEGREE DAYS, AVERAGE ROOMS PER HOUSING UNIT, AND NUMBER         00026
                 C      OF HOUSING UNITS USING EACH TYPE OF FUEL FOR THE STATE.              00027
                 C                                                                           00028
 0012                   READ(IRD,130) ISTX,IDUM,DD,SSIZE,SCOAL,SOIL,SGAS,SWOOD               00029
 0013              130 FORMAT (A2,A4,4X,F5.0,1X,F3.1,1X,5F10.0)                              00030
 0014                   WRITE(IPR,220) DD,IYR,SSIZE,SCOAL,SOIL,SGAS,SWOOD                    00031
 0015              220 FORMAT (T50,'THERE WERE',F6.0,' DEGREE DAYS IN 19',A2,//,T50,         00032
                      1'THE AVERAGE HOUSING UNIT HAD',F4.1,' ROOMS',//,T55,                  00033
                      2'THE NUMBER OF HOUSING UNITS HEATING WITH VARIOUS FUELS IS,',//,      00034
                      3T55,'COAL',F10.0,/,                                                   00035
                      4T56,'OIL',F10.0,/,T46,'NATURAL GAS',F10.0,/,T55,'WOOD',F10.0,/)       00036
                 C                                                                           00037
                 C      READ STATE FUEL TOTALS IN UNITS UTITLIZED BY THE AREA SOURCE FORM.00038
                 C                                                                           00039
 0016                   READ(IRD,110) IST,ANTHR,BITMRC,BITMI,DOILRC,DOILI,ROILC,ROILI,       00040
                      1IS2,NATGR,NATGCI,NATGI,RWD,VESD,VESR,IS3,ONGAS,OFFGAS,ONDSL,OFFDSL00041
 0017              110 FORMAT (A2,8X,7F10.0,/,A2,8X,8F10.0,/A2,8X,8F10.0)                    00042
 0018                   WRITE(IPR,210) ANTHR,BITMRC,BITMI,DOILRC,DOILI,ROILC,ROILI,          00043
                      1NATGR,NATGCI,NATGI,RWD,VESD,VESR,ONGAS,OFFGAS,ONDSL,OFFDSL            00044
 0019              210 FORMAT (/,T50,'RESIDENTIAL',T72,'COMMER/INST',T90,'INDUSTRIAL',//,00045
                      1T30,'ANTHRACITE COAL',T49,F10.0,/,T30,'BITUMINOUS COAL',T59,F10.0,00046
                      2T93,F10.0,/,T30,'DISTILLATE OIL',T59,F10.0,T93,F10.0,/,               00047
FORTRAN IV G1  RELEASE 2.0            MAIN             DATE = 76200        10/30/06             PAGE 0002
                             3T30,'RESIDUAL OIL',T71,F10.0,T93,F10.0,/,T30,'NATURAL GAS',        00048
                             4T49,F10.0,T71,F10.0,T93,F10.0,//,T49,'RAILROADS',F10.0,            00049
                             5//,T40,'VESSELS',F10.0,' DISTILLATE',T75,F10.0,' RESIDUAL',//,     00050
                             6T20,'GASOLINE ON HIGHWAY',F10.0,' (1000 GAL)',10X,                 00051
                             7'OFF HIGHWAY',F10.0,' (1000 GAL)',//,T20,'DIESEL ON HIGHWAY',      00052
                             8F10.0,' (1000 GAL)',12X,'OFF HIGHWAY',F10.0,' (1000 GAL)',//)      00053
                       C                                                                         00054
                       C      CALCULATE LIGHT AND HEAVY GASOLINE USAGE.                          00055
                       C                                                                         00056
 0020                         STMVT=HWGAS*13.0                                                   00057**3
 0021                         SGASL=STMVT*0.89/13.6                                              00058
 0022                         SGASH=STMVT*0.11/8.4                                               00059
 0023                         WRITE(IPW,320) SGASL,SGASH,STMVT                                   00060
 0024                     320 FORMAT (T50,'LIGHT VECHICLES',F10.0,' (1000 GAL)',/,               00061
                             1T50,'HEAVY VECHICLES',F10.0,' (1000 GAL)',/,                       00062
                             2T50,'TOTAL STATE GAS VMT',F10.0,' (1000 MI)',/)                    00063
                       C                                                                         00064
                       C      CALCULATE STATE HEATING FUEL AND SUBTRACT FROM STATE FUEL TOTAL.   00065
                       C                                                                         00066
 0025                         CALL HEATNG(DD,SSIZE,SCOAL,1,COAL)                                 00067
 0026                         ANTHR=ANTHR-COAL                                                   00068
 0027                         IF(ANTHR.LT.0.0) BITMRC=BITMRC+ANTHR                               00069
 0028                         CALL HEATNG(DD,SSIZE,SOIL,4,OIL)                                   00070
 0029                         DOILRC=DOILRC-OIL                                                  00071
 0030                         CALL HEATNG(DD,SSIZE,SGAS,3,GAS)                                   00072
 0031                         NATGH=NATGH-GAS                                                    00073
 0032                         CALL HEATNG(DD,SSIZE,SWOOD,6,WOOD)                                 00074
 0033                         WRITE(IPW,300)                                                     00075
 0034                     300 FORMAT ( /,T50,'RESIDENTIAL AREA FUEL')                            00076
 0035                         WRITE(IPW,230) COAL,ZERO,OIL,ZERO,GAS,WOOD                         00077
                       C                                                                         00078
                       C      READ STATE AND COUNTY CODES, COUNTY POPULATION, EMPLOYMENT DATA    00079
                       C      COUNTY AUTOMOBILE AND TRUCK REGISTRATION.                          00080
                       C                                                                         00081
 0036                     105 READ(IRD,100) COUNTY,ISTATE,ICNTY,IYR,CPOP,CCIEMP,CINEMP,          00082
                             1CREGA,CREGT                                                        00083
 0037                         IF(CPOP.EQ.0.0) GO TO 115                                          00084
 0038                         WRITE(IPW,200) COUNTY,CPOP,CCIEMP,CINEMP,CREGA,CREGT               00085
                       C                                                                         00086
                       C      READ DEGREE DAYS, AVERAGE ROOMS PER HOUSING UNIT, AND NUMBER       00087
                       C      OF HOUSING UNITS USING EACH TYPE OF FUEL FOR THE COUNTY.           00088
                       C                                                                         00089
 0039                         READ(IRD,130) ISTY,ICNTYX,DD,CSIZE,CCOAL,COIL,CGAS,CWOOD           00090
 0040                         WRITE(IPW,220) DD,IYR,CSIZE,CCOAL,COIL,CGAS,CWOOD                  00091
                       C                                                                         00092
                       C      READ THE COUNTY FUEL TOTALS FOR COMMER/INSTITUTIONAL AND           00093
                       C      INDUSTRIAL POINT SOURCES.                                          00094
                       C                                                                         00095
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FORTRAN IV G1  RELEASE 2.0             MAIN             DATE = 78204          10/36/00             PAGE 0003

0041                 READ(IRD,100) ISTA,ICNTYX,CIACOL,CIHCOL,CIDOIL,CIROIL,CIGAS,ICNT2,00096
                    1INACOL,INHCOL,INDOIL,INROIL,INGAS                                     00097
0042             100 FORMAT (A2,A4,A4,5F10.0,/2X,A4,A4,5F10.0)                               00098
0043                 WRITE(IPR,270)                                                          00099
0044             270 FORMAT (//,T35,'COMMERCIAL/INSTITUTIONAL POINT SOURCE FUELS')          00100
0045                 WRITE(IPR,230) CIACOL,CIHCOL,CIDOIL,CIROIL,CIGAS,ZERO                   00101
0046                 WRITE(IPR,280)                                                          00102
0047             280 FORMAT (//,T41,'INDUSTRIAL POINT SOURCE FUELS')                         00103
0048                 WRITE(IPR,230) INACOL,INHCOL,INDOIL,INROIL,INGAS,ZERO                   00104
               C                                                                             00105
               C     CALCULATE COUNTY HEATING FUEL.                                          00106
               C                                                                             00107
0049                 CALL HEATNG(DD,CSIZE,CCOAL,1,COAL)                                      00108
0050                 CALL HEATNG(DD,CSIZE,COIL,4,OIL)                                        00109
0051                 CALL HEATNG(DD,CSIZE,CGAS,5,GAS)                                        00110
0052                 CALL HEATNG(DD,CSIZE,CWOOD,6,WOOD)                                      00111
0053                 WRITE(IPR,240) COUNTY                                                   00112
0054             240 FORMAT (1H1,//,T35,'AREA EMISSION INVENTORY FOR ',3A4,                  00113
                   1          /,T45,'RESIDENTIAL AREA FUELS')                                00114
0055                 WRITE(IPR,230) COAL,ZERO,OIL,ZERO,GAS,WOOD                              00115
               C                                                                             00116
               C     CALCULATE THE COMMERCIAL/INSTITUTIONAL FUELS FOR AREA SOURCES.          00117
               C                                                                             00118
0056                 IF(ANTHR.LT.0.0) ANTHR=0.0                                              00119
0057                 RATIOC=CTEMP/SCTEMP                                                     00120
0058                 CANTH=RATIOC*ANTHRC-CIACOL -INACOL                                      00121**3
0059                 CBITUM=RATIOC*BITMRC-CIHCOL                                             00122
0060                 CDOIL=RATIOC*DOILRC-CIDOIL                                              00123
0061                 CROIL=RATIOC*ROILC-CIROIL                                               00124
0062                 CNGAS=RATIOC*NATGCI-CIGAS                                               00125
0063                 WRITE(IPR,250)                                                          00126
0064             250 FORMAT (//,T40,'COMMERCIAL/INSTITUTIONAL AREA FUELS')                   00127
0065                 WRITE(IPR,230) CANTH,CBITUM,CDOIL,CROIL,CNGAS,ZERO                      00128
0066             230 FORMAT ( /,T40,'ANTH COAL',F10.0,' (10 TONS)',/,T45,'BITUM COAL',       00129
                   1F10.0,' (10 TONS)',/,T41,'DISTILLATE OIL',F10.0,' (10000 GAL)',/,        00130
                   2 T43,'RESIDUAL OIL',F10.0,' (10000 GAL)',/,T44,'NATURAL GAS',            00131
                   3F10.0,' (10 MILLION CU FT)',/,T51,'WOOD',F10.0,' (100 TONS)',/)          00132
               C                                                                             00133
               C     CALCULATE INDUSTRIAL AREA FUELS.                                        00134
               C                                                                             00135
0067                 RATIOI=ITEMP/SITEMP                                                     00136
0068                 IBITUM=RATIOI*BITMI-IHCOL                                               00137
0069                 IDOIL=RATIOI*DOILI-INDOIL                                               00138
0070                 IROIL=RATIOI*ROILI-INROIL                                               00139
0071                 INGAS=RATIOI*NATGI-INGAS                                                00140
0072                 WRITE(IPR,260)                                                          00141
0073             260 FORMAT (//,T45,'INDUSTRIAL AREA FUELS')                                 00142
0074                 WRITE(IPR,230) ZERO,IBITUM,IDOIL,IROIL,INGAS,ZERO                       00143
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FORTRAN IV G1  RELEASE 2.0            MAIN             DATE = 76288        14/30/06             PAGE 0004
                  C                                                                        00144
                  C      APPORTION RAILROAD DISTILLATE OIL.                                00145
                  C                                                                        00146
 0075                    RATIOP=CPOP/SPOP                                                  00147
 0076                    ORR=RATIOP*RRD                                                    00148
 0077                    WRITE(IPR,290) ORR                                                00149
 0078               290  FORMAT (/,T35,'RAILROAD DIESEL FUEL IS',F10.0,' (10000 GAL)',/)   00150
                  C                                                                        00151
                  C      CALCULATE COUNTY GASOLINE AND DIESEL FUEL ALLOCATION.             00152
                  C                                                                        00153
 0079                    CGASL=SGASL*CREGA/SREGA                                           00154
 0080                    CGASH=SGASH*CREGT/SREGT                                           00155
 0081                    COFGAS=OFFGAS*RATIOP                                              00156
 0082                    CDSL=ONDSL*CREGT/SREGT                                            00157
 0083                    COFDSL=OFFDSL*RATIOP                                              00158
 0084                    CVMT=CGASL*13.4+CGASH*8.4+CDSL*5.1                                00159
 0085                    CTGAS=CGASL+CGASH+COFGAS                                          00160
 0086                    WRITE(IPR,330) CGASL,CGASH,COFGAS,      CDSL,COFDSL,CVMT          00161
 0087               330  FORMAT (/,T55,'GASOLINE',//,T15,'LIGHT VECH',F10.0,' (1000 GAL)', 00162
                        105X,'HEAVY VECH',F10.0,' (1000 GAL)',05X,'OFF HIGH',F10.0,        00163
                        2' (1000 GAL)',///,T55,'DIESEL',//,T35,'ON HIGH',F10.0,' (1000 GAL)00164**2
                        3',05X,'OFF HIGH',F10.0,' (1000 GAL)',//T45,'TOTAL VMT',F10.0,     00165**2
                        4' (1000 MI)',//)                                                  00166
                  C                                                                        00167
                  C      CALCULATE SOLVENT PURCHASES.                                      00168
                  C                                                                        00169
 0088                    SOL=3.0                                                           00170
 0089                    IF(CPOP.GE.100000.0.AND.CPOP.LT.500000.0) SOL=8.0                 00171
 0090                    IF(CPOP.GE.500000.0.AND.CPOP.LT.1000000.0) SOL=18.0               00172
 0091                    IF(CPOP.GT.1000000.0) SOL=28.0                                    00173
 0092                    SOLVNT=SOL*CPOP/2000.0                                            00174
 0093                    WRITE(IPR,310) SOLVNT                                             00175
 0094               310  FORMAT (//,T40,'SOLVENT PURCHASED ',F7.0,' (TONS)')               00176
 0095                    GO TO 105                                                         00177
 0096               125  CONTINUE                                                          00178
 0097                    STOP                                                              00179
 0098                    END                                                               00180
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FORTRAN IV G1  RELEASE 2.0           HEATNG          DATE = 76268        10/36/06            PAGE 0001

                                                                                     00181
 0001              SUBROUTINE HEATNG(DD,SIZE,HOSUNT,IFUEL,FUEL)                      00182
 0002              DIMENSION FAC(7),UNIT(7)                                          00183
 0003              DATA FAC/22.0,25.0,1.0,0.14,0.15,17.0,0.095/                      00184
 0004              DATA UNIT/10.0,10.0,10000.0,10000.0,10000.0,100.0,1.0/            00185
             C                                                                       00186
             C     THE EQUATION TO CALCULATE FUEL CONSUMPTION FOR RESIDENTIAL        00187
             C     HEATING IS FROM P.80, GUIDELINES FOR AQMPA, VOL.7.                00188
             C                                                                       00189
 0005              FUEL=(0.012HR*DD+30.41*SIZE    -79.54)/FAC(IFUEL)                 00190
 0006              FUEL=FUEL*HOSUNT                                                  00191
 0007              FUEL=FUEL/UNIT(IFUEL)                                             00192
 0008              RETURN                                                            00193
 0009              END
```

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                      AREA EMISSION INVENTORY FOR OHIO

                          TOTAL POPULATION =  10743000.

                 TOTAL COMMERCIAL/INSTITUTIONAL EMPLOYMENT =  1408482.

                      TOTAL INDUSTRIAL EMPLOYMENT =   1594940.

                         AUTOMOBILE REGISTRATION  5837241.

                            TRUCK REGISTRATION   820742.

                          THERE WERE 5524. DEGREE DAYS IN 1974

                          THE AVERAGE HOUSING UNIT HAD 5.3 ROOMS

           THE NUMBER OF HOUSING UNITS HEATING WITH VARIOUS FUELS IS.

                               COAL   101229.
                                OIL   467265.
                        NATURAL GAS  2613177.
                               WOOD     4628.

                          RESIDENTIAL           COMMER/INST           INDUSTRIAL

      ANTHRACITE COAL        10132.
      BITUMINOUS COAL                   113000.                         1125400.
      DISTILLATE OIL                     77309.                           24578.
      RESIDUAL OIL                                         5212.          17426.
      NATURAL GAS            43580.                       19250.          42469.

                          RAILROADS    14981.

                 VESSELS     1117. DISTILLATE            1336. RESIDUAL

GASOLINE ON HIGHWAY  4773247. (1000 GAL)          OFF HIGHWAY   137168. (1000 GAL)

DIESEL ON HIGHWAY   553451. (1000 GAL)            OFF HIGHWAY   103698. (1000 GAL)

                          LIGHT VECHICLES  4060769. (1000 GAL)
                          HEAVY VECHICLES   812588. (1000 GAL)
                          TOTAL STATE GAS VMT 62052208. (1000 MI)

                          RESIDENTIAL AREA FUEL

                         ANTH COAL    70893. (10 TONS)
                        BITUM COAL        0. (10 TONS)
                    DISTILLATE OIL    51423. (10000 GAL)
                      RESIDUAL OIL        0. (10000 GAL)
                       NATURAL GAS    40261. (10 MILLION CU FT)
                              WOOD      819. (100 TONS)
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             AREA EMISSION INVENTORY FOR BELMONT

                 TOTAL POPULATION =     82400.

       TOTAL COMMERCIAL/INSTITUTIONAL EMPLOYMENT =     4929.

             TOTAL INDUSTRIAL EMPLOYMENT =      7623.

                AUTOMOBILE REGISTRATION    43247.

                  TRUCK REGISTRATION     5140.

                 THERE WERE 5483. DEGREE DAYS IN 1974

                 THE AVERAGE HOUSING UNIT HAD 5.2 ROOMS

    THE NUMBER OF HOUSING UNITS HEATING WITH VARIOUS FUELS IS,

                        COAL     4968.
                         OIL     4707.
                 NATURAL GAS    16107.
                        WOOD       80.


    COMMERCIAL/INSTITUTIONAL POINT SOURCE FUELS

                 ANTH COAL         0. (10 TONS)
                BITUM COAL         0. (10 TONS)
            DISTILLATE OIL         0. (10000 GAL)
              RESIDUAL OIL         0. (10000 GAL)
               NATURAL GAS         0. (10 MILLION CU FT)
                      WOOD         0. (100 TONS)


           INDUSTRIAL POINT SOURCE FUELS

                 ANTH COAL         0. (10 TONS)
                BITUM COAL      9600. (10 TONS)
            DISTILLATE OIL         0. (10000 GAL)
              RESIDUAL OIL         0. (10000 GAL)
               NATURAL GAS         0. (10 MILLION CU FT)
                      WOOD         0. (100 TONS)
```

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                    AREA EMISSION INVENTORY FOR BELMONT
                         RESIDENTIAL AREA FUELS

                         ANTH COAL      3370. (10 TONS)
                        BITUM COAL         0. (10 TONS)
                    DISTILLATE OIL       502. (10000 GAL)
                      RESIDUAL OIL         0. (10000 GAL)
                       NATURAL GAS       240. (10 MILLION CU FT)
                              WOOD         7. (100 TONS)


                 COMMERCIAL/INSTITUTIONAL AREA FUELS

                         ANTH COAL         0. (10 TONS)
                        BITUM COAL       183. (10 TONS)
                    DISTILLATE OIL        91. (10000 GAL)
                      RESIDUAL OIL        18. (10000 GAL)
                       NATURAL GAS        67. (10 MILLION CU FT)
                              WOOD         0. (100 TONS)


                      INDUSTRIAL AREA FUELS

                         ANTH COAL         0. (10 TONS)
                        BITUM COAL     -4221. (10 TONS)
                    DISTILLATE OIL       117. (10000 GAL)
                      RESIDUAL OIL        83. (10000 GAL)
                       NATURAL GAS       203. (10 MILLION CU FT)
                              WOOD         0. (100 TONS)

              RAILROAD DIESEL FUEL IS      115. (10000 GAL)

                                 GASOLINE

LIGHT VECH    30085. (1000 GAL)    HEAVY VECH     5089. (1000 GAL)     OFF HIGH     1052. (1000 GAL)

                                  DIESEL

              ON HIGH     3466. (1000 GAL)     OFF HIGH      795. (1000 GAL)

                          TOTAL VMT   469586. (1000 MI)


                SOLVENT PURCHASED    124. (TONS)
```

APPENDIX C

NEDS AREA SOURCE FORMS

Belmont

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
Input Form
Date Feb-77

FORM APPROVED
OMB NO. 158-R0095

Name of Person Completing Form V. Corbin

State		County				AQCR		
1	2	3	4	5	6	7	8	9
3	6	0	5	4	0	1	8	1

Year of Record	SIP EMISSION ESTIMATES (10^2 tons/yr) Particulate	SO$_2$	NO$_x$	HC	CO	SULFUR CONTENT (%) Anth. Coal	Bitum. Coal	Dist. Oil	Resid. Oil	ASH CONTENT (%) Anth. Coal	Bitum. Coal	RESIDENTIAL FUEL Anth. Coal 10^1 tons	Bitumin. Coal 10^1 tons	Dist. Oil 10^4 Gal.	Resid. Oil 10^4 Gal.	Nat. Gas 10^7 ft^3	Wood 10^2 tons	Action		cd
10-11	12-16	17-20	21-24	25-29	30-34	35-36	37-38	39-40	41-42	43-45	46-48	49-53	54-59	60-64	65-68	69-73	74-77	78	79	80
74						07	21	03	33	146	120	0	3270	562	0	240	7	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10^1 tons	Bitumin. 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	INDUSTRIAL FUEL Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Coke 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	Process Gas 10^7 ft^3		Action		cd
10-14	15-19	20-24	25-29	30-33	34-35	36-41	42-47	48-51	52-56	57-61	62-66	67-69	70-73	74-77	78	79	80
0	0	91	18	67	0	0	0	0	0	0	203	0	0		A	A	2

ON SITE INCINERATION Residential 10^1 tons	Industrial 10^2 tons	Comm. Inst. 10^2 tons	OPEN BURNING Residential 10^2 tons	Industrial 10^2 tons	Comm'l-Instit'l 10^2 tons	GASOLINE FUEL Light Vehicle 10^3 Gals.	Heavy Vehicle 10^3 Gals.	Off Hiway 10^3 Gals	DIESEL FUEL Heavy Vehicle 10^3 Gals.	Off Hiway 10^4 Gals.	Rail Locomotive 10^4 Gals.	Pop Cat	Action		cd
10-15	16-20	21-24	25-30	31-36	37-41	42-48	49-54	55-60	61-66	67-71	72-76	77	78	79	80
				0		30485	5289	1052	3466	80	221	5	A	A	3

AIRCRAFT Military LTO CYC 10^2	Civil LTO CYC 10^1	Commercial LTO CYC 10^1	VESSELS Coal 10^1 tons	Diesel Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Gasoline 10^3 Gals	EVAPORATION Solvent Purchased tons yr	Gasoline Marketed 10^5 Gals	MEASURED VEHICLE MILES Limited Access Road 10^4 Miles	Rural Roads 10^4 Miles	Suburban Roads 10^4 Miles	Urban Roads 10^4 Miles	Action		cd
10-13	14-19	20-24	25-28	29-32	33-37	38-41	42-47	48-52	53-58	59-64	65-70	71-77	78	79	80
0	548	5	0	0	0	0	124	362		23480		23480	A	A	4

Dirt Roads Traveled 10^3 Vehicle miles	Dirt Air Strips LTO CYCLES	Construction Acres	Miscellaneous Wind Erosion 10^3 Acres	Land Tilling 10^3 Acres	FOREST WILDFIRES Acres Burned	Tons/acres Burned	MANAGED BURNING (Slash/Prescribed Burning) Acres Burned	Tons/Acres Burned	AGRICULTURAL FIELD BURNING Acres Burned	Tons/Acres Burned	FROST CONTROL 10^2 Orchard Heaters Operating	Days/Fired Days/year	STRUCTURE FIRES Fires/year	Action		cd
10-16	17-21	22-27	28-32	33-37	38-44	45-47	48-53	54-56	57-62	63-65	66-69	70-72	73-77	78	79	80
96800	0	596		110										A	A	5

COMMENTS	Action		cd
10-77	78	79	80
		A	6

EPA (DUR) 219
3/72

FORM APPROVED
OMB NO. 158 R0005

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
Input Form
Date Feb 77

Name of Person Completing Form V. Cohn

State		County				AQCR		
1	2	3	4	5	6	7	8	9
3	6	0	9	0	0	0	7	9

	SIP EMISSION ESTIMATES (10^2 tons/yr)					SULFUR CONTENT (%)				ASH CONTENT (%)		RESIDENTIAL FUEL								
Year of Record	Particulate	SO_2	NO_x	HC	CO	Anth. Coal	Bitum. Coal	Dist. Oil	Resid. Oil	Anth. Coal	Bitum. Coal	Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Dist. Oil 10^4 Gal.	Resid. Oil 10^4 Gal.	Nat. Gas 10^7 ft.^{3}	Wood 10^2 tons	Action		cd
10-11	12-16	17-20	21-24	25-29	30-34	35-36	37-38	39-40	41-42	43-45	46-48	49-53	54-59	60-64	65-68	69-73	74-77	78	79	80
74						5.7	2.8	0.3	1.0	14.6	7.5	0	1146	3044	0	642	5	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL						INDUSTRIAL FUEL											
Anth. 10^1 tons	Bitumin. 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Coke 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft.^{3}	Wood 10^2 tons	Process Gas 10^7 ft^3		Action		cd
10-14	15-19	20-24	25-29	30-33	34-35	36-41	42-47	48-51	52-56	57-61	62-66	67-69	70-73	74-77	78	79	80
0	0	550	.85	409	0	0	0	0	0	0	438	0	0		A	A	2

ON SITE INCINERATION			OPEN BURNING			GASOLINE FUEL			DIESEL FUEL						
Residential 10^1 tons	Industrial 10^2 tons	Comm. Inst. 10^2 tons	Residential 10^2 tons	Industrial 10^2 tons	Comm'l - Instit. 10^2 tons	Light Vehicle 10^3 Gals.	Heavy Vehicle 10^3 Gals.	Off Hiway 10^3 Gals.	Heavy Vehicle 10^3 Gals.	Off Hiway 10^4 Gals.	Rail Locomotive 10^4 Gals.	Pop Code	Action		cd
10-15	16-20	21-24	25-30	31-36	37-41	42-48	49-54	55-60	61-66	67-71	72-76	77	78	79	80
				0		85665	17063	3548	11635	230	248	7	A	A	3

AIRCRAFT			VESSELS				EVAPORATION		MEASURED VEHICLE MILES						
Military LTO CYC 10^2	Civil LTO CYC 10^1	Commercial LTO CYC 10^1	Coal 10^1 tons	Diesel Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Gasoline 10^3 Gals.	Solvent Purchased tons yr	Gasoline Marketed 10^5 Gals.	Limited Access Road 10^4 Miles	Rural Roads 10^4 Miles	Suburban Roads 10^4 Miles	Urban Roads 10^4 Miles	Action		cd
10-13	14-19	20-24	25-28	29-32	33-37	38-41	42-47	48-52	53-58	59-64	65-70	71-77	78	79	80
	6050	468	0	0	0	0	155	1859	14600	129755		5767	A	A	4

					FOREST WILDFIRES		MANAGED BURNING (Slash/Prescribed Burning)		AGRICULTURAL FIELD BURNING		FROST CONTROL 10^2		STRUCTURE FIRES			
Dirt Roads Traveled 10^3 Vehicle miles	Dirt Air Strips LTO CYCLES	Construction Acres	Miscellaneous Wind Erosion 10^3 Acres	Land Tilling 10^3 Acres	Acres Burned	Tons/acres Burned	Acres Burned	Tons/Acres Burned	Acres Burned	Tons/Acres Burned	Orchard Heaters Operating	Days/Fired Days/year	Fires/year	Action		cd
10-16	17-21	22-27	28-32	33-37	38-44	45-47	48-53	54-56	57-62	63-65	66-69	70-72	73-77	78	79	80
33400	0	1800		266										A	A	5

COMMENTS	Action		cd
10-77	78	79	80
		A	6

EPA (DUR) 219
3/72

36.4

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
Input Form
Date Feb 77

FORM APPROVED
OMB NO. 158 R0095

Name of Person Completing Form V. Corben

State	County	AQCR
36	1260	173

Year of Record	SIP EMISSION ESTIMATES (10^2 tons/yr) Particulate	SO_2	NO_x	HC	CO	SULFUR CONTENT (%) Anth. Coal	Bitum. Coal	Dist Oil	Resid Oil	ASH CONTENT (%) Anth. Coal	Bitum. Coal	RESIDENTIAL FUEL Anth Coal 10^1 tons	Bitumin Coal 10^1 tons	Dist. Oil 10^4 Gal.	Resid. Oil 10^4 Gal.	Nat. Gas 10^7 ft.3	Wood 10^2 tons	Action		cd
74						07	14	03	09	146	155	0	449	519	0	607	10	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10^1 tons	Bitumin. 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft3	Wood 10^2 tons	INDUSTRIAL FUEL Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Coke 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft3	Wood 10^2 tons	Process Gas 10^7 ft3		Action		cd
0	0	358	66	244	0	0	0	0	0	0	513	0	0		A	A	2

ON SITE INCINERATION Residential 10^1 tons	Industrial 10^2 tons	Comm. Inst. 10^2 tons	OPEN BURNING Residential 10^2 tons	Industrial 10^2 tons	Comm'l Instit. 10^2 tons	GASOLINE FUEL Light Vehicle 10^3 Gals.	Heavy Vehicle 10^3 Gals.	Off Hiway 10^3 Gals.	DIESEL FUEL Heavy Vehicle 10^3 Gals.	Off Hiway 10^4 Gals.	Rail Locomotive 10^4 Gals.	Pass Car	Action		cd
					5	61102	11223	26[illegible]	17[illegible]14	152	216	6	A	A	3

AIRCRAFT Military LTO CYC 10^2	Civil LTO CYC 10^1	Commercial LTO CYC 10^1	VESSELS Coal 10^1 tons	Diesel Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Gasoline 10^3 Gals.	EVAPORATION Solvent Purchased tons/yr	Gasoline Marketed 10^5 Gals.	MEASURED VEHICLE MILES Limited Access Road 10^4 Miles	Rural Roads 10^4 Miles	Suburban Roads 10^4 Miles	Urban Roads 10^4 Miles	Action		cd
71	2472	204	0	0	0	0	[illegible]	743		32572		57860	A	A	4

Dirt Roads Traveled 10^3 Vehicle miles	Dirt Air Strips LTO CYCLES	Construction Acres	Miscellaneous Wind Erosion 10^3 Acres	Land Tilling 10^3 Acres	FOREST WILDFIRES Acres Burned	Tons/acres Burned	MANAGED BURNING (Slash Prescribed Burning) Acres Burned	Tons/Acres Burned	AGRICULTURAL FIELD BURNING Acres Burned	Tons/Acres Burned	FROST CONTROL 10^2 Orchard Heaters Operating	Days/Fired Days/year	STRUCTURE FIRES Fires/year	Action		cd
33300	0	1020		354										A	A	5

COMMENTS	Action		cd
		A	6

EPA (DUR) 219
3/72

[illegible]

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
Input Form
Date Feb 77

FORM APPROVED
OMB NO. 158 R0095

Name of Person Completing Form V Cobin

State (1–2)	County (3–6)	AQCR (7–9)
36	1500	277

Year of Record (10–11)	SIP EMISSION ESTIMATES (10^2 tons/yr) Particulate (12–16)	SO$_2$ (17–20)	NO$_x$ (21–24)	HC (25–29)	CO (30–34)	SULFUR CONTENT (%) Anth. Coal (35–36)	Bitum. Coal (37–38)	Dist. Oil (39–40)	Resid. Oil (41–42)	ASH CONTENT (%) Anth. Coal (43–45)	Bitum. Coal (46–48)	RESIDENTIAL FUEL Anth. Coal 10^1 tons (49–53)	Bitumin. Coal 10^1 tons (54–59)	Dist. Oil 10^4 Gal. (60–64)	Resid. Oil 10^4 Gal. (65–68)	Nat. Gas 10^7 ft.^{3} (69–73)	Wood 10^2 tons (74–77)	Action (78)	(79)	cd (80)
74						0.7	2.9	0.3	0.9	19.6	23.1	0	727	2116	0	36	8	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10^1 tons (10–14)	Bitumin. 10^1 tons (15–19)	Dist. Oil 10^4 Gals. (20–24)	Resid. Oil 10^4 Gals. (25–29)	Nat. Gas 10^7 Ft^3 (30–33)	Wood 10^2 tons (34–35)	INDUSTRIAL FUEL Anth. Coal 10^1 tons (36–41)	Bitum. Coal 10^1 tons (42–47)	Coke 10^1 tons (48–51)	Dist. Oil 10^4 Gals. (52–56)	Resid. Oil 10^4 Gals. (57–61)	Nat. Gas 10^7 Ft^3 (62–66)	Wood 10^2 tons (67–69)	Process Gas 10^7 ft^3 (70–73)	(74–77)	Action (78)	(79)	cd (80)
0	0	42	8	31	0	0	0	0	0	0	152	0	0		A	A	2

ON SITE INCINERATION Residential 10^1 tons (10–15)	Industrial 10^2 tons (16–20)	Comm. Inst. 10^2 tons (21–24)	OPEN BURNING Residential 10^2 tons (25–30)	Industrial 10^2 tons (31–36)	Comm'l-Instit. 10^2 tons (37–41)	GASOLINE FUEL Light Vehicle 10^1 Gals. (42–48)	Heavy Vehicle 10^3 Gals. (49–54)	Off Hiway 10^3 Gals. (55–60)	DIESEL FUEL Heavy Vehicle 10^3 Gals. (61–66)	Off Hiway 10^4 Gals. (67–71)	Rail Locomotive 10^4 Gals. (72–76)	Pop Cd (77)	Action (78)	(79)	cd (80)
				0		42543	1132	1397	6212	11	52	2	A	A	3

AIRCRAFT Military LTO CYC 10^2 (10–13)	Civil LTO CYC 10^1 (14–19)	Commercial LTO CYC 10^1 (20–24)	VESSELS Coal 10^1 tons (25–28)	Diesel Oil 10^4 Gals. (29–32)	Resid. Oil 10^4 Gals. (33–37)	Gasoline 10^3 Gals. (38–41)	EVAPORATION Solvent Purchased tons yr (42–47)	Gasoline Marketed 10^5 Gals. (48–52)	MEASURED VEHICLE MILES Limited Access Road 10^4 Miles (53–58)	Rural Roads 10^4 Miles (59–64)	Suburban Roads 10^4 Miles (65–70)	Urban Roads 10^4 Miles (71–77)	Action (78)	(79)	cd (80)
1	1004	40	0	0	0	0	418	513	10220	55656		1 77	A	A	4

Dirt Roads Traveled 10^3 Vehicle miles (10–16)	Dirt Air Strips LTO CYCLES (17–21)	Construction Acres (22–27)	Miscellaneous Wind Erosion 10^3 Acres (28–32)	Land Tilling 10^3 Acres (33–37)	FOREST WILDFIRES Acres Burned (38–44)	Tons/acres Burned (45–47)	MANAGED BURNING (Slash/Prescribed Burning) Acres Burned (48–53)	Tons/Acres Burned (54–56)	AGRICULTURAL FIELD BURNING Acres Burned (57–62)	Tons/Acres Burned (63–65)	FROST CONTROL 10^2 Orchard Heaters Operating (66–69)	Days/Fixed Days/year (70–72)	STRUCTURE FIRES Fires/year (73–77)	Action (78)	(79)	cd (80)
42800	0	985		155										A	A	5

COMMENTS (10–77)	Action (78)	(79)	cd (80)
		A	6

EPA (DUR) 210
2/72

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
Input Form
Date Feb 77

FORM APPROVED
OMB NO. 158-R0096

Name of Person Completing Form ↓ Cobie

State		County				AQCR		
1	2	3	4	5	6	7	8	9
3	6	1	4	4	0	1	8	1

Year of Record (10–11)	SIP EMISSION ESTIMATES (10^2 tons/yr) Particulate (12–16)	SO$_2$ (17–20)	NO$_x$ (21–24)	HC (25–29)	CO (30–34)	SULFUR CONTENT (%) Anth. Coal (35–36)	Bitum. Coal (37–38)	Dist. Oil (39–40)	Resid. Oil (41–42)	ASH CONTENT (%) Anth. Coal (43–45)	Bitum. Coal (46–48)	RESIDENTIAL FUEL Anth. Coal 10^1 tons (49–53)	Bitum. Coal 10^1 tons (54–59)	Dist. Oil 10^4 Gal. (60–64)	Resid. Oil 10^4 Gal. (65–68)	Nat. Gas 10^7 ft.^{3} (69–73)	Wood 10^2 tons (74–77)	Action (78)	(79)	cd (80)
74						0.7	2.5	0.3	0.9	14.6	15.3	0	3172	752	0	350	5	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10^1 tons (10–14)	Bitumin. 10^1 tons (15–19)	Dist. Oil 10^4 Gals. (20–24)	Resid. Oil 10^4 Gals. (25–29)	Nat. Gas 10^7 Ft^3 (30–33)	Wood 10^2 tons (34–35)	INDUSTRIAL FUEL Anth. Coal 10^1 tons (36–41)	Bitum. Coal 10^1 tons (42–47)	Coke 10^1 tons (48–51)	Dist. Oil 10^4 Gals. (52–56)	Resid. Oil 10^4 Gals. (57–61)	Nat. Gas 10^7 Ft^3 (62–66)	Wood 10^2 tons (67–69)	Process Gas 10^7 ft^3 (70–73)	(74–77)	Action (78)	(79)	cd (80)
0	0	203	91	151	0	0	0	0	0	0	259	0	0		A	A	2

ON SITE INCINERATION Residential 10^1 tons (10–15)	Industrial 10^2 tons (16–20)	Comm. Inst. 10^2 tons (21–24)	OPEN BURNING Residential 10^2 tons (25–30)	Industrial 10^2 tons (31–36)	Comm'l. Instit'l. 10^2 tons (37–41)	GASOLINE FUEL Light Vehicle 10^3 Gals. (42–48)	Heavy Vehicle 10^3 Gals. (49–54)	Off Hiway 10^3 Gals. (55–60)	DIESEL FUEL Heavy Vehicle 10^3 Gals. (61–66)	Off Hiway 10^4 Gals. (67–71)	Rail Locomotive 10^4 Gals. (72–76)	Pop Cat (77)	Action (78)	(79)	cd (80)
				0		4162	6873	1417	4677	107	210	5	A	A	3

AIRCRAFT Military LTO CYC 10^2 (10–13)	Civil LTO CYC 10^3 (14–19)	Commercial LTO CYC 10^1 (20–24)	VESSELS Coal 10^1 tons (25–28)	Diesel Oil 10^4 Gals. (29–32)	Resid. Oil 10^4 Gals. (33–37)	Gasoline 10^3 Gals. (38–41)	EVAPORATION Solvent Purchased tons yr (42–47)	Gasoline Marketed 10^5 Gals. (48–52)	MEASURED VEHICLE MILES Limited Access Road 10^4 Miles (53–58)	Rural Roads 10^4 Miles (59–64)	Suburban Roads 10^4 Miles (65–70)	Urban Roads 10^4 Miles (71–77)	Action (78)	(79)	cd (80)
0	2927	37	0	0	0	0	444	534		34109		34109	A	A	4

Dirt Roads Traveled 10^3 Vehicle miles (10–16)	Dirt Air Strips LTO CYCLES (17–21)	Construction Acres (22–27)	Miscellaneous Wind Erosion 10^3 Acres (28–32)	Land Tilling 10^3 Acres (33–37)	FOREST WILDFIRES Acres Burned (38–44)	Tons/acres Burned (45–47)	MANAGED BURNING (Slash/Prescribed Burning) Acres Burned (48–53)	Tons/Acres Burned (54–56)	AGRICULTURAL FIELD BURNING Acres Burned (57–62)	Tons/Acres Burned (63–65)	FROST CONTROL 10^2 Orchard Heaters Operating (66–69)	Days/Fired Days/year (70–72)	STRUCTURE FIRES Fires/year (73–77)	Action (78)	(79)	cd (80)
31500	1000	596		210										A	A	5

COMMENTS (10–77)	Action (78)	(79)	cd (80)
		A	6

EPA (DUR) 219
3/72

Cuyahoga

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
Input Form
Date Feb 77

FORM APPROVED
OMB NO. 158 R0035

Name of Person Completing Form V. Colon

State	County	AQCR
1 2	3 4 5 6	7 8 9
3 6	1 6 0 0	1 7 4

Year of Record	SIP EMISSION ESTIMATES (10^2 tons/yr) Particulate	SO$_2$	NO$_x$	HC	CO	SULFUR CONTENT (%) Anth. Coal	Bitum. Coal	Dist. Oil	Resid. Oil	ASH CONTENT (%) Anth. Coal	Bitum. Coal	Anth. Coal 10^1 tons	Bitumin. Coal 10^1 tons	RESIDENTIAL FUEL Dist. Oil 10^4 Gal.	Resid. Oil 10^4 Gal.	Nat. Gas 10^7 ft^3	Wood 10^2 tons	Action		cd
10 11	12 13 14 15 16	17 18 19 20	21 22 23 24	25 26 27 28 29	30 31 32 33 34	35 36	37 38	39 40	41 42	43 44 45	46 47 48	49 50 51 52 53	54 55 56 57 58 59	60 61 62 63 64	65 66 67 68	69 70 71 72 73	74 75 76 77	78	79	80
74						07	24	03	05	746	79	0	2082	1263	0	7812	4	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10^1 tons	Bitumin. 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	INDUSTRIAL FUEL Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Coke 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	Process Gas 10^7 ft^3		Action		cd
10 11 12 13 14	15 16 17 18 19	20 21 22 23 24	25 26 27 28 29	30 31 32 33	34 35	36 37 38 39 40 41	42 43 44 45 46 47	48 49 50 51	52 53 54 55 56	57 58 59 60 61	62 63 64 65 66	67 68 69	70 71 72 73	74 75 76 77	78	79	80
0	0	3752	865	3534	0	0	0	0	0	0	8407	0	0		A	A	2

ON SITE INCINERATION Residential 10^1 tons	Industrial 10^2 tons	Comm. Inst. 10^2 tons	OPEN BURNING Residential 10^2 tons	Industrial 10^2 tons	Comm'l-Instit'l 10^2 tons	GASOLINE FUEL Light Vehicle 10^3 Gals.	Heavy Vehicle 10^3 Gals.	Off Hiway 10^3 Gals.	DIESEL FUEL Heavy Vehicle 10^3 Gals.	Off Hiway 10^4 Gals.	Rail Locomotive 10^4 Gals.	Pay Code	Action		cd
10 11 12 13 14 15	16 17 18 19 20	21 22 23 24	25 26 27 28 29 30	31 32 33 34 35 36	37 38 39 40 41	42 43 44 45 46 47 48	49 50 51 52 53 54	55 56 57 58 59 60	61 62 63 64 65 66	67 68 69 70 71	72 73 74 75 76	77	78	79	80
				8		659173	58151	21087	39606	1588	277	7	A	A	3

AIRCRAFT Military LTO CYC 10^2	Civil LTO CYC 10^1	Commercial LTO CYC 10^1	VESSELS Coal 10^1 tons	Diesel Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Gasoline 10^3 Gals.	EVAPORATION Solvent Purchased tons yr	Gasoline Marketed 10^5 Gals.	MEASURED VEHICLE MILES Limited Access Road 10^4 Miles	Rural Roads 10^4 Miles	Suburban Roads 10^4 Miles	Urban Roads 10^4 Miles	Action		cd
10 11 12 13	14 15 16 17 18 19	20 21 22 23 24	25 26 27 28	29 30 31 32	33 34 35 36 37	38 39 40 41	42 43 44 45 46 47	48 49 50 51 52	53 54 55 56 57 58	59 60 61 62 63 64	65 66 67 68 69 70	71 72 73 74 75 76 77	78	79	80
16	14161	0		325	254	0	23034	6883	737075	59094		337770	A	A	4

Dirt Roads Traveled 10^3 Vehicle miles	Dirt Air Strips LTO CYCLES	Construction Acres	Miscellaneous Wind Erosion 10^3 Acres	Land Tilling 10^3 Acres	FOREST WILDFIRES Acres Burned	Tons/Acre Burned	MANAGED BURNING (Slash/Prescribed Burning) Acres Burned	Tons/Acre Burned	AGRICULTURAL FIELD BURNING Acres Burned	Tons/Acre Burned	FROST CONTROL 10^2 Orchard Heaters Operating	Days/Fired Days/year	STRUCTURE FIRES Fires/year	Action		cd
10 11 12 13 14 15 16	17 18 19 20 21	22 23 24 25 26 27	28 29 30 31 32	33 34 35 36 37	38 39 40 41 42 43 44	45 46 47	48 49 50 51 52 53	54 55 56	57 58 59 60 61 62	63 64 65	66 67 68 69	70 71 72	73 74 75 76 77	78	79	80
5810	0	11900		12										A	A	5

COMMENTS	Action		cd
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77	78	79	80
		A	6

EPA (Dup) 219
8/72

[illegible]

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

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Date Feb 77

FORM APPROVED
OMB NO 158 R[illegible]

Name of Person Completing Form: V. Colon

State		County				AQCR		
1	2	3	4	5	6	7	8	9
5	6	2	2	5	0	1	7	6

Field	Card columns	Entry
Year of Record	10–11	74
SIP EMISSION ESTIMATES (10² tons/yr): Particulate	12–16	
SO₂	17–20	
NOₓ	21–24	
HC	25–29	
CO	30–34	
SULFUR CONTENT (%): Anth. Coal	35–36	67
Bitum. Coal	37–38	26
Dist. Oil	39–40	[illegible]3
Resid. Oil	41–42	[illegible]9
ASH CONTENT (%): Anth. Coal	43–45	196
Bitum. Coal	46–48	27
RESIDENTIAL FUEL: Anth. Coal 10³ tons	49–53	0
Bitumin. Coal 10³ tons	54–59	732
Dist. Oil 10⁴ Gal.	60–64	1555
Resid. Oil 10⁴ Gal.	65–68	0
Nat. Gas 10⁷ ft³	69–73	3517
Wood 10² tons	74–77	0
Action	78	A
	79	A
cd	80	1

Field	Card columns	Entry
COMMERCIAL AND INSTITUTIONAL FUEL: Anth. 10³ tons	10–14	0
Bitumin. 10³ tons	15–19	0
Dist. Oil 10⁴ Gals.	20–24	1722
Resid. Oil 10⁴ Gals.	25–29	565
Nat. Gas 10⁷ ft³	30–33	1157
Wood 10² tons	34–35	0
INDUSTRIAL FUEL: Anth. Coal 10³ tons	36–41	0
Bitum. Coal 10³ tons	42–47	0
Coke 10³ tons	48–51	0
Dist. Oil 10⁴ Gals.	52–56	0
Resid. Oil 10⁴ Gals.	57–61	0
Nat. Gas 10⁷ ft³	62–66	9972
Wood 10² tons	67–69	0
Process Gas 10⁷ ft³	70–73	0
	74–77	
Action	78	A
	79	A
cd	80	2

Field	Card columns	Entry
ON SITE INCINERATION: Residential 10³ tons	10–15	
Industrial 10² tons	16–20	
Comm. Inst. 10² tons	21–24	
OPEN BURNING: Residential 10² tons	25–30	
Industrial 10² tons	31–36	5
Comm'l-Instit. 10² tons	37–41	
GASOLINE FUEL: Light Vehicle 10³ Gals.	42–48	318913
Heavy Vehicle 10³ Gals.	49–54	95322
Off Hiway 10³ Gals.	55–60	17935
DIESEL FUEL: Heavy Vehicle 10³ Gals.	61–66	31179
Off Hiway 10⁴ Gals.	67–71	2[illegible]7
Rail Locomotive 10⁴ Gals.	72–76	910
Pro Con	77	9
Action	78	A
	79	A
cd	80	3

Field	Card columns	Entry
AIRCRAFT: Military LTO CYC 10²	10–13	51
Civil LTO CYC 10¹	14–19	27722
Commercial LTO CYC 10¹	20–24	0
VESSELS: Coal 10³ tons	25–28	0
Diesel Oil 10⁴ Gals.	29–32	0
Resid. Oil 10⁴ Gals.	33–37	0
Gasoline 10³ Gals.	38–41	0
EVAPORATION: Solvent Purchased tons yr	42–47	7782
Gasoline Marketed 10⁵ Gals.	48–52	1757
MEASURED VEHICLE MILES: Limited Access Road 10⁴ Miles	53–58	222431
Rural Roads 10⁴ Miles	59–64	35[illegible]
Suburban Roads 10⁴ Miles	65–70	
Urban Roads 10⁴ Miles	71–77	116997
Action	78	A
	79	A
cd	80	4

Field	Card columns	Entry
Dirt Roads Traveled 10³ Vehicle miles	10–16	25600
Dirt Air Strips LTO CYCLES	17–21	0
Construction Acres	22–27	7320
Miscellaneous Wind Erosion 10³ Acres	28–32	
Land Tilling 10³ Acres	33–37	283
FOREST WILDFIRES: Acres Burned	38–44	
Tons/Acres Burned	45–47	
MANAGED BURNING (Slash Prescribed Burning): Acres Burned	48–53	
Tons/Acres Burned	54–56	
AGRICULTURAL FIELD BURNING: Acres Burned	57–62	
Tons/Acres Burned	63–65	
FROST CONTROL 10²: Orchard Heaters Operating	66–69	
Days/Fired Days/year	70–72	
STRUCTURE FIRES: Fires/year	73–77	
Action	78	A
	79	A
cd	80	5

Field	Card columns	Entry
COMMENTS	10–77	
Action	78	
	79	A
cd	80	6

EPA (Dur) 219
8/72

Orange

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

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Date Feb 77

FORM APPROVED
OMB NO. 158-R0295

Name of Person Completing Form V. Cohen

State	County	AQCR
26	2350	124

Year of Record	SIP EMISSION ESTIMATES (10^2 tons/yr) Particulate	SO$_2$	NO$_x$	HC	CO	SULFUR CONTENT (%) Anth. Coal	Bitum. Coal	Dist. Oil	Resid. Oil	ASH CONTENT (%) Anth. Coal	Bitum. Coal	RESIDENTIAL FUEL Anth. Coal 10^3 tons	Bitumin Coal 10^3 tons	Dist. Oil 10^5 Gal.	Resid. Oil 10^4 Gal.	Nat. Gas 10^7 ft^3	Wood 10^2 tons	Action		cd
74						01	21	02	09	146	71	0	642	1587	0	62	37	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10^1 tons	Bitumin. 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	INDUSTRIAL FUEL Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Coke 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	Process Gas 10^7 ft^3		Action		cd
0	0	75	19	79	0	0	0	0	0	0	97	0	0		A	A	2

ON SITE INCINERATION Residential 10^1 tons	Industrial 10^2 tons	Comm. Inst. 10^2 tons	OPEN BURNING Residential 10^2 tons	Industrial 10^2 tons	Comm'l Instit. 10^2 tons	GASOLINE FUEL Light Vehicle 10^3 Gals.	Heavy Vehicle 10^3 Gals.	Off Hiway 10^3 Gals.	DIESEL FUEL Heavy Vehicle 10^3 Gals.	Off Hiway 10^4 Gals.	Rail Locomotive 10^4 Gals.	Pop Cd	Action		cd
				6		24768	5397	243	13713	67	51	1	A	A	3

AIRCRAFT Military LTO CYC 10^2	Civil LTO CYC 10^1	Commercial LTO CYC 10^1	VESSELS Coal 10^1 tons	Diesel Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Gasoline 10^3 Gals.	EVAPORATION Solvent Purchased tons yr	Gasoline Marketed 10^5 Gals.	MEASURED VEHICLE MILES Limited Access Road 10^4 Miles	Rural Roads 10^4 Miles	Suburban Roads 10^4 Miles	Urban Roads 10^4 Miles	Action		cd
2	1355	13	0	0	0	0	77	312		16257		6033	A	A	4

Dirt Roads Traveled 10^3 Vehicle miles	Dirt Air Strips LTO CYCLES	Construction Acres	Wind/Erosion Wind Erosion 10^3 Acres	Land Tilling 10^3 Acres	FOREST WILDFIRES Acres Burned	Tons/Acre Burned	MANAGED BURNING (Slash/Prescribed Burning) Acres Burned	Tons/Acre Burned	AGRICULTURAL FIELD BURNING Acres Burned	Tons/Acre Burned	FROST CONTROL 10^2 Orchard Heaters Operating	Days/Yr Used Days/year	STRUCTURE FIRES Fires/year	Action		cd
24900	500	781		65										A	A	5

COMMENTS	Action		cd
		A	6

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5/72

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
Input Form
Date Feb 77

FORM APPROVED
OMB NO 158-R

Name of Person Completing Form: K. Cohen

State	County	AQCR
1 2	3 4 5 6	7 8 9
36	2580	173

Year of Record	Particulate	SO_2	NO_x	HC	CO	Sulfur Content (%) Anth. Coal	Bitum. Coal	Dist. Oil	Resid Oil	Ash Content (%) Anth. Coal	Bitum. Coal	Residential Fuel Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Dist. Oil 10^4 Gal.	Resid. Oil 10^4 Gal.	Nat. Gas 10^7 ft^3	Wood 10^2 tons	Action		cd
10 11	12–16	17–20	21–24	25–29	30–34	35 36	37 38	39 40	41 42	43–45	46–48	49–53	54–59	60–64	65–68	69–73	74–77	78	79	80
74						3.7	1.0	0.3	3.9	11.6	7.2	0	232	1561	0	365	[illegible]	A	A	1

Commercial and Institutional Fuel Anth. 10^1 tons	Bitumin. 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	Industrial Fuel Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Coke 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	Process Gas 10^7 ft^3		Action		cd
10–14	15–19	20–24	25–29	30–33	34 35	36–41	42–47	48–51	52–56	57–61	62–66	67–69	70–73	74–77	78	79	80
0	0	71	15	50	0	0	0	0	0	0	275	0	0		A	A	2

On Site Incineration Residential 10^1 tons	Industrial 10^2 tons	Comm. Inst. 10^2 tons	Open Burning Residential 10^2 tons	Industrial 10^2 tons	Comm'l - Instit. 10^2 tons	Gasoline Fuel Light Vehicle 10^3 Gals.	Heavy Vehicle 10^3 Gals.	Off Hiway 10^3 Gals.	Diesel Fuel Heavy Vehicle 10^3 Gals.	Off Hiway 10^4 Gals.	Rail Locomotive 10^4 Gals.	Pop Code	Action		cd
10–15	16–20	21–24	25–30	31–36	37–41	42–48	49–54	55–60	61–66	67–71	72–76	77	78	79	80
				5		19432	2496	1516	5786	152	58	7	A	A	3

Aircraft Military LTO CYC 10^2	Civil LTO CYC 10^1	Commercial LTO CYC 10^1	Vessels Coal 10^1 tons	Diesel Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Gasoline 10^3 Gals.	Evaporation Solvent Purchased tons yr	Gasoline Marketed 10^5 Gals.	Measured Vehicle Miles Limited Access Road 10^4 Miles	Rural Roads 10^4 Miles	Suburban Roads 10^4 Miles	Urban Roads 10^4 Miles	Action		cd
10–13	14–19	20–24	25–28	29–32	33–37	38–41	42–47	48–52	53–58	59–64	65–70	71–77	78	79	80
1	2575	10	0	0	0	0	336	575		23175		54095	A	A	4

Dirt Roads Traveled 10^3 Vehicle miles	Dirt Air Strips LTO CYCLES	Construction Acres	Miscellaneous Wind Erosion 10^3 Acres	Land Tilling 10^3 Acres	Forest Wildfires Acres Burned	Tons/Acre Burned	Managed Burning (Slash/Prescribed Burning) Acres Burned	Tons/Acre Burned	Agricultural Field Burning Acres Burned	Tons/Acre Burned	Frost Control 10^2 Orchard Heaters Operating	Days/Year	Structure Fires Fires/year	Action		cd
10–16	17–21	22–27	28–32	33–37	38–44	45–47	48–53	54–56	57–62	63–65	66–69	70–72	73–77	78	79	80
22600	0	254		320										A	A	5

COMMENTS	Action		cd
10–77	78	79	80
		A	6

EPA (Durh) 219
3/72

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
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Date Feb 77

FORM APPROVED
OMB NO. 158-R0035

Name of Person Completing Form V. Colson

State (1-2)	County (3-6)	AQCR (7-9)
36	2720	079

Year of Record (10-11)	SIP EMISSION ESTIMATES (10² tons/yr) Particulate (12-16)	SO₂ (17-20)	NOₓ (21-24)	HC (25-29)	CO (30-34)	SULFUR CONTENT (%) Anth. Coal (35-36)	Bitum. Coal (37-38)	Dist. Oil (39-40)	Resid. Oil (41-42)	ASH CONTENT (%) Anth. Coal (43-45)	Bitum. Coal (46-48)	RESIDENTIAL FUEL Anth. Coal 10¹ tons (49-53)	Bitumin. Coal 10¹ tons (54-59)	Dist. Oil 10⁴ Gal. (60-64)	Resid. Oil 10⁴ Gal. (65-68)	Nat. Gas 10⁷ ft.³ (69-73)	Wood 10² tons (74-77)	Action (78)	(79)	cd (80)
74						0.7	2.1	0.3	1.1	14.6	15.0	0	3193	2265	0	3244	9	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10¹ tons (10-14)	Bitumin. 10¹ tons (15-19)	Dist. Oil 10⁴ Gals. (20-24)	Resid. Oil 10⁴ Gals. (25-29)	Nat. Gas 10⁷ Ft³ (30-33)	Wood 10² tons (34-35)	INDUSTRIAL FUEL Anth. Coal 10¹ tons (36-41)	Bitum. Coal 10¹ tons (42-47)	Coke 10¹ tons (48-51)	Dist. Oil 10⁴ Gals. (52-56)	Resid. Oil 10⁴ Gals. (57-61)	Nat. Gas 10⁷ Ft³ (62-66)	Wood 10² tons (67-69)	Process Gas 10⁷ ft³ (70-73)	(74-77)	Action (78)	(79)	cd (80)
0	0	2523	467	1987	0	0	0	0	0	0	5005	0	0		A	A	2

ON SITE INCINERATION Residential 10¹ tons (10-15)	Industrial 10² tons (16-20)	Comm. Inst. 10² tons (21-24)	OPEN BURNING Residential 10² tons (25-30)	Industrial 10² tons (31-36)	Comm'l Instit'l. 10² tons (37-41)	GASOLINE FUEL Light Vehicle 10³ Gals. (42-48)	Heavy Vehicle 10³ Gals. (49-54)	Off Hiway 10³ Gals. (55-60)	DIESEL FUEL Heavy Vehicle 10³ Gals. (61-66)	Off Hiway 10⁴ Gals. (67-71)	Rail Locomotive 10⁴ Gals. (72-76)	Pop Code (77)	Action (78)	(79)	cd (80)
				0		323[illegible]	[illegible]	11632	27759	880	331	9	A	A	3

AIRCRAFT Military LTO CYC 10² (10-13)	Civil LTO CYC 10¹ (14-19)	Commercial LTO CYC 10¹ (20-24)	VESSELS Coal 10¹ tons (25-28)	Diesel Oil 10⁴ Gals. (29-32)	Resid. Oil 10⁴ Gals. (33-37)	Gasoline 10³ Gals. (38-41)	EVAPORATION Solvent Purchased tons yr (42-47)	Gasoline Marketed 10⁵ Gals. (48-52)	MEASURED VEHICLE MILES Limited Access Road 10⁴ Miles (53-58)	Rural Roads 10⁴ Miles (59-64)	Suburban Roads 10⁴ Miles (65-70)	Urban Roads 10⁴ Miles (71-77)	Action (78)	(79)	cd (80)
10	12457	32	0	44	0	0	[illegible]	3761	215468	209991		20540	A	A	4

Dirt Roads Traveled 10³ Vehicle miles (10-16)	Dirt Air Strips LTO CYCLES (17-21)	Construction Acres (22-27)	Miscellaneous Wind Erosion 10³ Acres (28-32)	Land Tilling 10³ Acres (33-37)	FOREST WILDFIRES Acres Burned (38-44)	Tons/acres Burned (45-47)	MANAGED BURNING (Slash/Prescribed Burning) Acres Burned (48-53)	Tons/Acres Burned (54-56)	AGRICULTURAL FIELD BURNING Acres Burned (57-62)	Tons/Acres Burned (63-65)	FROST CONTROL 10² Orchard Heaters Operating (66-69)	Days/Fired Days/year (70-72)	STRUCTURE FIRES Fires/year (73-77)	Action (78)	(79)	cd (80)
23300	0	6450		47										A	A	5

COMMENTS (10-77)	Action (78)	(79)	cd (80)
		A	6

EPA (DUR) 219
3/72

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
Input Form
Date Feb 77

FORM APPROVED
OMB NO 158 R0055

Name of Person Completing Form V. Corbin

State		County				AQCR		
1	2	3	4	5	6	7	8	9
3	6	3	1	6	0	1	8	1

Year of Record	SIP EMISSION ESTIMATES (10^2 tons/yr) Particulate	SO$_2$	NO$_x$	HC	CO	SULFUR CONTENT (%) Anth. Coal	Bitum. Coal	Dist. Oil	Resid. Oil	ASH CONTENT (%) Anth. Coal	Bitum. Coal	RESIDENTIAL FUEL Anth. Coal 10^1 tons	Bitumin Coal 10^1 tons	Dist. Oil 10^4 Gal.	Resid. Oil 10^4 Gal.	Nat. Gas 10^7 ft.^{3}	Wood 10^2 tons	Action		cd
10–11	12–16	17–20	21–24	25–29	30–34	35–36	37–38	39–40	41–42	43–45	46–48	49–53	54–59	60–64	65–68	69–73	74–77	78	79	80
74						07	99	03	07	146	148	0	2[illegible]35	69[illegible]	0	268	2	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10^1 tons	Bitumin. 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	INDUSTRIAL FUEL Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Coke 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft.^{3}	Wood 10^2 tons	Process Gas 10^7 ft^3		Action		cd
10–14	15–19	20–24	25–29	30–33	34–35	36–41	42–47	48–51	52–56	57–61	62–66	67–69	70–73	74–77	78	79	80
0	0	174	35	138	0	0	0	0	0	0	249	0	0		A	A	2

ON SITE INCINERATION Residential 10^1 tons	Industrial 10^2 tons	Comm. Inst. 10^2 tons	OPEN BURNING Residential 10^2 tons	Industrial 10^2 tons	Comm'l-Instit'l. 10^2 tons	GASOLINE FUEL Light Vehicle 10^3 Gals.	Heavy Vehicle 10^3 Gals.	Off Hiway 10^3 Gals.	DIESEL FUEL Heavy Vehicle 10^3 Gals.	Off Hiway 10^4 Gals.	Rail Locomotive 10^4 Gals.	Pop Code	Action		cd
10–15	16–20	21–24	25–30	31–36	37–41	42–48	49–54	55–60	61–66	67–71	72–76	77	78	79	80
				0		34656	7505	1226	5111	93	230	5	A	A	3

AIRCRAFT Military LTO CYC 10^2	Civil LTO CYC 10^1	Commercial LTO CYC 10^1	VESSELS Coal 10^1 tons	Diesel Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Gasoline 10^3 Gals.	EVAPORATION Solvent Purchased tons yr	Gasoline Marketed 10^5 Gals.	MEASURED VEHICLE MILES Limited Access Road 10^4 Miles	Rural Roads 10^4 Miles	Suburban Roads 10^4 Miles	Urban Roads 10^4 Miles	Action		cd
10–13	14–19	20–24	25–28	29–32	33–37	38–41	42–47	48–52	53–58	59–64	65–70	71–77	78	79	80
8	1218	15					194	434		28022		28022	A	A	4

Dirt Roads Traveled 10^3 Vehicle miles	Dirt Air Strips LTO CYCLES	Construction Acres	Miscellaneous Wind Erosion 10^3 Acres	Land Tilling 10^3 Acres	FOREST WILDFIRES Acres Burned	Tons/acres Burned	MANAGED BURNING (Slash/Prescribed Burning) Acres Burned	Tons/Acres Burned	AGRICULTURAL FIELD BURNING Acres Burned	Tons/Acres Burned	FROST CONTROL 10^2 Orchard Heaters Operating	Days/Fired Days/year	STRUCTURE FIRES Fires/year	Action		cd
10–16	17–21	22–27	28–32	33–37	38–44	45–47	48–53	54–56	57–62	63–65	66–69	70–72	73–77	78	79	80
26500	250	709		67										A	A	5

COMMENTS	Action		cd
10–77	78	79	80
		A	6

EPA (DUR) 219
3/72

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NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
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Date Feb 77

FORM APPROVED
OMB NO. 158 R0395

Name of Person Completing Form v. Corbin

State		County				AQCR		
1	2	3	4	5	6	7	8	9
3	6	2	2	8	0	1	7	4

Year of Record	SIP EMISSION ESTIMATES (10^2 tons/yr) Particulate	SO$_2$	NO$_x$	HC	CO	SULFUR CONTENT (%) Anth. Coal	Bitum. Coal	Dist. Oil	Resid. Oil	ASH CONTENT (%) Anth. Coal	Bitum. Coal	RESIDENTIAL FUEL Anth. Coal 10^1 tons	Bitumin. Coal 10^1 tons	Dist. Oil 10^4 Gal.	Resid. Oil 10^4 Gal.	Nat. Gas 10^7 ft.^{3}	Wood 10^2 tons	Action		cd
10 11	12 13 14 15 16	17 18 19 20	21 22 23 24	25 26 27 28 29	30 31 32 33 34	35 36	37 38	39 40	41 42	43 44 45	46 47 48	49 50 51 52 53	54 55 56 57 58 59	60 61 62 63 64	65 66 67 68	69 70 71 72 73	74 75 76 77	78	79	80
74						0.7	3.1	0.6	0.9	14.6	14.4	0	252	1474	0	692	0	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10^1 tons	Bitumin. 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	INDUSTRIAL FUEL Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Coke 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft.^{3}	Wood 10^2 tons	Process Gas 10^7 ft^3		Action		cd
10 11 12 13 14	15 16 17 18 19	20 21 22 23 24	25 26 27 28 29	30 31 32 33	34 35	36 37 38 39 40 41	42 43 44 45 46 47	48 49 50 51	52 53 54 55 56	57 58 59 60 61	62 63 64 65 66	67 68 69	70 71 72 73	74 75 76 77	78	79	80
0	0	395	78	298	0	0	0	0	0	0	999	0	0		A	A	2

ON SITE INCINERATION Residential 10^1 tons	Industrial 10^2 tons	Comm. Inst. 10^2 tons	OPEN BURNING Residential 10^2 tons	Industrial 10^2 tons	Comm'l-Instit'l. 10^2 tons	GASOLINE FUEL Light Vehicle 10^3 Gals.	Heavy Vehicle 10^3 Gals.	Off Hiway 10^3 Gals.	DIESEL FUEL Heavy Vehicle 10^3 Gals.	Off Hiway 10^4 Gals.	Rail Locomotive 10^4 Gals.	Pop Cat	Action		cd
10 11 12 13 14 15	16 17 18 19 20	21 22 23 24	25 26 27 28 29 30	31 32 33 34 35 36	37 38 39 40 41	42 43 44 45 46 47 48	49 50 51 52 53 54	55 56 57 58 59 60	61 62 63 64 65 66	67 68 69 70 71	72 73 74 75 76	77	78	79	80
				8		79278	9795	2573	6671	195	162	8	A	A	3

AIRCRAFT Military LTO CYC 10^2	Civil LTO CYC 10^1	Commercial LTO CYC 10^1	VESSELS Coal 10^1 tons	Diesel Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Gasoline 10^3 Gals.	EVAPORATION Solvent Purchased tons yr	Gasoline Marketed 10^5 Gals.	MEASURED VEHICLE MILES Limited Access Road 10^4 Miles	Rural Roads 10^4 Miles	Suburban Roads 10^4 Miles	Urban Roads 10^4 Miles	Action		cd
10 11 12 13	14 15 16 17 18 19	20 21 22 23 24	25 26 27 28	29 30 31 32	33 34 35 36 37	38 39 40 41	42 43 44 45 46 47	48 49 50 51 52	53 54 55 56 57 58	59 60 61 62 63 64	65 66 67 68 69 70	71 72 73 74 75 76 77	78	79	80
4	9140	50	0	160	118	0	806	976	68584	28945		70608	A	A	4

Dirt Roads Traveled 10^3 Vehicle miles	Dirt Air Strips LTO CYCLES	Construction Acres	Miscellaneous Wind Erosion 10^3 Acres	Land Tilling 10^3 Acres	FOREST WILDFIRES Acres Burned	Tons/acres Burned	MANAGED BURNING (Slash/Prescribed Burning) Acres Burned	Tons/Acres Burned	AGRICULTURAL FIELD BURNING Acres Burned	Tons/Acres Burned	FROST CONTROL 10^2 Orchard Heaters Operating	Days/Fired Days/year	STRUCTURE FIRES Fires/year	Action		cd
10 11 12 13 14 15 16	17 18 19 20 21	22 23 24 25 26 27	28 29 30 31 32	33 34 35 36 37	38 39 40 41 42 43 44	45 46 47	48 49 50 51 52 53	54 55 56	57 58 59 60 61 62	63 64 65	66 67 68 69	70 71 72	73 74 75 76 77	78	79	80
14100	0	1571	27											A	A	5

COMMENTS	Action		cd
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77	78	79	80
		A	6

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NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

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Date Feb 77

FORM APPROVED
OMB NO. 158 R0095

Name of Person Completing Form: V. Cohen

State	State	County	County	County	County	AQCR	AQCR	AQCR
1	2	3	4	5	6	7	8	9
3	6	2	6	4	0	1	7	4

	SIP EMISSION ESTIMATES (10² tons/yr)					SULFUR CONTENT (%)				ASH CONTENT (%)		RESIDENTIAL FUEL								
Year of Record	Particulate	SO₂	NOₓ	HC	CO	Anth. Coal	Bitum. Coal	Dist. Oil	Resid. Oil	Anth. Coal	Bitum. Coal	Anth. Coal 10¹ tons	Bitumin. Coal 10¹ tons	Dist. Oil 10⁴ Gal.	Resid. Oil 10⁴ Gal.	Nat. Gas 10⁷ ft.³	Wood 10² tons	Action		cd
10–11	12–16	17–20	21–24	25–29	30–34	35–36	37–38	39–40	41–42	43–45	46–48	49–53	54–59	60–64	65–68	69–73	74–77	78	79	80
74						0.7	2.8	0.3	1.4	14.6	13.6	0	618	566	0	1087	0	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL						INDUSTRIAL FUEL											
Anth. 10¹ tons	Bitumin. 10¹ tons	Dist. Oil 10⁴ Gals.	Resid. Oil 10⁴ Gals.	Nat. Gas 10⁷ Ft³	Wood 10² tons	Anth. Coal 10¹ tons	Bitum. Coal 10¹ tons	Coke 10¹ tons	Dist. Oil 10⁴ Gals.	Resid. Oil 10⁴ Gals.	Nat. Gas 10⁷ Ft.³	Wood 10² tons	Process Gas 10⁷ ft³		Action		cd
10–14	15–19	20–24	25–29	30–33	34–35	36–41	42–47	48–51	52–56	57–61	62–66	67–69	70–73	74–77	78	79	80
0	0	711	143	529	0	0	0	0	0	0	739	0	0		A	A	2

ON SITE INCINERATION			OPEN BURNING			GASOLINE FUEL			DIESEL FUEL						
Residential 10¹ tons	Industrial 10² tons	Comm. Inst. 10² tons	Residential 10² tons	Industrial 10² tons	Comm'l-Instit'l. 10² tons	Light Vehicle 10³ Gals.	Heavy Vehicle 10³ Gals.	Off Hiway 10³ Gals.	Heavy Vehicle 10³ Gals.	Off Hiway 10⁴ Gals.	Rail Locomotive 10⁴ Gals.	Pop Cat	Action		cd
10–15	16–20	21–24	25–30	31–36	37–41	42–48	49–54	55–60	61–66	67–71	72–76	77	78	79	80
				0		102584	16556	2367	11276	255	322	8	A	A	3

AIRCRAFT			VESSELS				EVAPORATION		MEASURED VEHICLE MILES						
Military LTO CYC 10²	Civil LTO CYC 10¹	Commercial LTO CYC 10¹	Coal 10¹ tons	Diesel Oil 10⁴ Gals.	Resid. Oil 10⁴ Gals.	Gasoline 10³ Gals.	Solvent Purchased tons yr	Gasoline Marketed 10⁵ Gals.	Limited Access Road 10⁴ Miles	Rural Roads 10⁴ Miles	Suburban Roads 10⁴ Miles	Urban Roads 10⁴ Miles	Action		cd
10–13	14–19	20–24	25–28	29–32	33–37	38–41	42–47	48–52	53–58	59–64	65–70	71–77	78	79	80
6	7099	1801	0	0	0	0	1355	225		31834		127337	A	A	4

					FOREST WILDFIRES		MANAGED BURNING (Slash/Prescribed Burning)		AGRICULTURAL FIELD BURNING		FROST CONTROL 10²		STRUCTURE FIRES			
Dirt Roads Traveled 10³ Vehicle-miles	Dirt Air Strips LTO CYCLES	Construction Acres	Miscellaneous Wind Erosion 10³ Acres	Land Tilling 10³ Acres	Acres Burned	Tons/acres Burned	Acres Burned	Tons/Acres Burned	Acres Burned	Tons/Acres Burned	Orchard Heaters Operating	Days/Fired Days/year	Fires/year	Action		cd
10–16	17–21	22–27	28–32	33–37	38–44	45–47	48–53	54–56	57–62	63–65	66–69	70–72	73–77	78	79	80
24700	0	1780		252										A	A	5

COMMENTS	Action		cd
10–77	78	79	80
		A	6

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FORM APPROVED
OMB NO 158-R0095

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

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Date Feb 77

Name of Person Completing Form V. Corbin

State		County				AQCR		
1	2	3	4	5	6	7	8	9
3	6	3	7	2	0	1	2	4

	SIP EMISSION ESTIMATES (10^2 tons/yr)					SULFUR CONTENT (%)				ASH CONTENT (%)		RESIDENTIAL FUEL								
Year of Record	Particulate	SO_2	NO_x	HC	CO	Anth. Coal	Bitum. Coal	Dist. Oil	Resid. Oil	Anth. Coal	Bitum. Coal	Anth. Coal 10^1 tons	Bitumin. Coal 10^1 tons	Dist. Oil 10^4 Gal.	Resid. Oil 10^4 Gal.	Nat. Gas 10^7 ft^3	Wood 10^2 tons	Action		cd
10-11	12-16	17-20	21-24	25-29	30-34	35-36	37-38	39-40	41-42	43-45	46-48	49-53	54-59	60-64	65-68	69-73	74-77	78	79	80
74						01	20	05	10	146	134	0	862	2077	0	2235	0	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL						INDUSTRIAL FUEL											
Anth. 10^1 tons	Bitumin. 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Coke 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	Process Gas 10^7 ft^3		Action		cd
10-14	15-19	20-24	25-29	30-33	34-35	36-41	42-47	48-51	52-56	57-61	62-66	67-69	70-73	74-77	78	79	80
0	0	1155	0	858	0	0	0	0	0	0	2129	0	0		A	A	2

ON SITE INCINERATION			OPEN BURNING			GASOLINE FUEL			DIESEL FUEL						
Residential 10^1 tons	Industrial 10^2 tons	Comm. Inst. 10^2 tons	Residential 10^2 tons	Industrial 10^2 tons	Comm'l-Instit. 10^2 tons	Light Vehicle 10^3 Gals.	Heavy Vehicle 10^3 Gals.	Off Hiway 10^3 Gals.	Heavy Vehicle 10^3 Gals.	Off Hiway 10^4 Gals.	Rail Locomotive 10^4 Gals.	Pop Cat	Action		cd
10-15	16-20	21-24	25-30	31-36	37-41	42-48	49-54	55-60	61-66	67-71	72-76	77	78	79	80
				0		189446	30230	6194	20589	968	320	9	A	A	3

AIRCRAFT			VESSELS				EVAPORATION		MEASURED VEHICLE MILES						
Military LTO CYC 10^2	Civil LTO CYC 10^1	Commercial LTO CYC 10^1	Coal 10^1 tons	Diesel Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Gasoline 10^3 Gals.	Solvent Purchased tons yr	Gasoline Marketed 10^5 Gals.	Limited Access Road 10^4 Miles	Rural Roads 10^4 Miles	Suburban Roads 10^4 Miles	Urban Roads 10^4 Miles	Action		cd
10-13	14-19	20-24	25-28	29-32	33-37	38-41	42-47	48-52	53-58	59-64	65-70	71-77	78	79	80
28	6333	947		202	111	0	1990	2259	114026	8030		95886	A	A	4

					FOREST WILDFIRES		MANAGED BURNING (Slash/Prescribed Burning)		AGRICULTURAL FIELD BURNING		FROST CONTROL 10^2		STRUCTURE FIRES			
Dirt Roads Traveled 10^3 Vehicle miles	Dirt Air Strips LTO CYCLES	Construction Acres	Miscellaneous Wind Erosion 10^3 Acres	Land Tilling 10^3 Acres	Acres Burned	Tons/acres Burned	Acres Burned	Tons/Acres Burned	Acres Burned	Tons/Acres Burned	Orchard Heaters Operating	Days/Fired Days/year	Fires/year	Action		cd
10-16	17-21	22-27	28-32	33-37	38-44	45-47	48-53	54-56	57-62	63-65	66-69	70-72	73-77	78	79	80
18900	0	3750		225										A	A	5

COMMENTS	Action		cd
10-77	78	79	80
		A	6

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NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

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FORM APPROVED
OMB NO. 158 R0095

Date Feb 77

Name of Person Completing Form V. Colon

State		County				AQCR		
1	2	3	4	5	6	7	8	9
3	6	4	4	6	0	1	8	1

Year of Record	SIP EMISSION ESTIMATES (10² tons/yr)					SULFUR CONTENT (%)				ASH CONTENT (%)		RESIDENTIAL FUEL								
	Particulate	SO₂	NOₓ	HC	CO	Anth. Coal	Bitum. Coal	Dist. Oil	Resid. Oil	Anth. Coal	Bitum. Coal	Anth. Coal 10¹ tons	Bitumin. Coal 10¹ tons	Dist. Oil 10⁴ Gal.	Resid. Oil 10⁴ Gal.	Nat. Gas 10⁷ ft.³	Wood 10² tons	Action		cd
10–11	12–16	17–20	21–24	25–29	30–34	35–36	37–38	39–40	41–42	43–45	46–48	49–53	54–59	60–64	65–68	69–73	74–77	78	79	80
74						0.7	2.3	0.3	0.9	19.6	71.5	0	252	121	0	54	6	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL						INDUSTRIAL FUEL											
Anth. 10¹ tons	Bitumin. 10¹ tons	Dist. Oil 10⁴ Gals.	Resid. Oil 10⁴ Gals.	Nat. Gas 10⁷ Ft³	Wood 10² tons	Anth. Coal 10¹ tons	Bitum. Coal 10¹ tons	Coke 10¹ tons	Dist. Oil 10⁴ Gals.	Resid. Oil 10⁴ Gals.	Nat. Gas 10⁷ Ft³	Wood 10² tons	Process Gas 10⁷ ft³		Action		cd
10–14	15–19	20–24	25–29	30–33	34–35	36–41	42–47	48–51	52–56	57–61	62–66	67–69	70–73	74–77	78	79	80
0	0	0	0	0	0	0	0	0	0	0	0	0	0		A	A	2

ON SITE INCINERATION			OPEN BURNING			GASOLINE FUEL			DIESEL FUEL						
Residential 10¹ tons	Industrial 10² tons	Comm. Inst. 10² tons	Residential 10² tons	Industrial 10² tons	Comm'l - Instit. 10² tons	Light Vehicle 10³ Gals.	Heavy Vehicle 10³ Gals.	Off Hiway 10³ Gals.	Heavy Vehicle 10³ Gals.	Off Hiway 10⁴ Gals.	Rail Locomotive 10⁴ Gals.	Pop Code	Action		cd
10–15	16–20	21–24	25–30	31–36	37–41	42–48	49–54	55–60	61–66	67–71	72–76	77	78	79	80
				0		5364	865	203	1589	15	34	2	A	A	3

AIRCRAFT			VESSELS				EVAPORATION		MEASURED VEHICLE MILES						
Military LTO CYC 10²	Civil LTO CYC 10¹	Commercial LTO CYC 10¹	Coal 10¹ tons	Diesel Oil 10⁴ Gals.	Resid. Oil 10⁴ Gals.	Gasoline 10³ Gals.	Solvent Purchased tons yr	Gasoline Marketed 10⁵ Gals.	Limited Access Road 10⁴ Miles	Rural Roads 10⁴ Miles	Suburban Roads 10⁴ Miles	Urban Roads 10⁴ Miles	Action		cd
10–13	14–19	20–24	25–28	29–32	33–37	38–41	42–47	48–52	53–58	59–64	65–70	71–77	78	79	80
0	300	5	0	0	0	0	24	6432		6658		1664	A	A	4

Dirt Roads Traveled 10³ Vehicle-miles	Dirt Air Strips LTO CYCLES	Construction Acres	Miscellaneous Wind Erosion 10³ Acres	Land Tilling 10³ Acres	FOREST WILDFIRES		MANAGED BURNING (Slash/Prescribed Burning)		AGRICULTURAL FIELD BURNING		FROST CONTROL 10²		STRUCTURE FIRES	Action		cd
					Acres Burned	Tons/acres Burned	Acres Burned	Tons/Acres Burned	Acres Burned	Tons/Acres Burned	Orchard Heaters Operating	Days/Fired Days/year	Fires/year			
10–16	17–21	22–27	28–32	33–37	38–44	45–47	48–53	54–56	57–62	63–65	66–69	70–72	73–77	78	79	80
9300	0	153		67										A	A	5

COMMENTS	Action		cd
10–77	78	79	80
		A	6

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NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

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FORM APPROVED
OMB NO 158 R[illegible]

Name of Person Completing Form: V. Cohen

State	State	County	County	County	County	AQCR	AQCR	AQCR
1	2	3	4	5	6	7	8	9
3	6	4	5	0	0	1	7	3

Year of Record (10-11)	SIP EMISSION ESTIMATES (10² tons/yr) Particulate (12-16)	SO₂ (17-20)	NOₓ (21-24)	HC (25-29)	CO (30-34)	SULFUR CONTENT (%) Anth. Coal (35-36)	Bitum. Coal (37-38)	Dist. Oil (39-40)	Resid Oil (41-42)	ASH CONTENT (%) Anth. Coal (43-45)	Bitum. Coal (46-48)	RESIDENTIAL FUEL Anth. Coal 10¹ tons (49-53)	Bitumin. Coal 10¹ tons (54-59)	Dist. Oil 10⁴ Gal. (60-64)	Resid. Oil 10⁴ Gal. (65-68)	Nat. Gas 10⁷ ft.³ (69-73)	Wood 10² tons (74-77)	Action (78)	(79)	cd (80)
74						07	15	02	02	146	144	0	793	1396	0	2428	2	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10¹ tons (10-14)	Bitumin. 10¹ tons (15-19)	Dist. Oil 10⁴ Gals. (20-24)	Resid. Oil 10⁴ Gals. (25-29)	Nat. Gas 10⁷ Ft³ (30-33)	Wood 10² tons (34-35)	INDUSTRIAL FUEL Anth. Coal 10¹ tons (36-41)	Bitum. Coal 10¹ tons (42-47)	Coke 10¹ tons (48-51)	Dist. Oil 10⁴ Gals. (52-56)	Resid. Oil 10⁴ Gals. (57-61)	Nat. Gas 10⁷ Ft.³ (62-66)	Wood 10² tons (67-69)	Process Gas 10⁷ ft³ (70-73)	(74-77)	Action (78)	(79)	cd (80)
0	0	1917	386	1336	0	0	0	0	0	0	2527	0	0		A	A	2

ON SITE INCINERATION Residential 10¹ tons (10-15)	Industrial 10² tons (16-20)	Comm. Inst. 10² tons (21-24)	OPEN BURNING Residential 10² tons (25-30)	Industrial 10² tons (31-36)	Comm'l-Instit'l. 10² tons (37-41)	GASOLINE FUEL Light Vehicle 10³ Gals. (42-48)	Heavy Vehicle 10³ Gals. (49-54)	Off Hiway 10³ Gals. (55-60)	DIESEL FUEL Heavy Vehicle 10³ Gals. (61-66)	Off Hiway 10⁴ Gals. (67-71)	Rail Locomotive 10⁴ Gals. (72-76)	Pay Code (77)	Action (78)	(79)	cd (80)
				0		237076	33821	7606	23035	575	268	9	A	A	3

AIRCRAFT Military LTO CYC 10² (10-13)	Civil LTO CYC 10¹ (14-19)	Commercial LTO CYC 10¹ (20-24)	VESSELS Coal 10¹ tons (25-28)	Diesel Oil 10⁴ Gals. (29-32)	Resid. Oil 10⁴ Gals. (33-37)	Gasoline 10³ Gals. (38-41)	EVAPORATION Solvent Purchased tons yr (42-47)	Gasoline Marketed 10⁵ Gals. (48-52)	MEASURED VEHICLE MILES Limited Access Road 10⁴ Miles (53-58)	Rural Roads 10⁴ Miles (59-64)	Suburban Roads 10⁴ Miles (65-70)	Urban Roads 10⁴ Miles (71-77)	Action (78)	(79)	cd (80)
9	12083	3258	0	0	0	0	5361	2785	129356	22010		128918	A	A	4

Dirt Roads Traveled 10³ Vehicle-miles (10-16)	Dirt Air Strips LTO CYCLES (17-21)	Construction Acres (22-27)	Miscellaneous Wind Erosion 10³ Acres (28-32)	Land Tilling 10³ Acres (33-37)	FOREST WILDFIRES Acres Burned (38-44)	Tons/acres Burned (45-47)	MANAGED BURNING (Slash/Prescribed Burning) Acres Burned (48-53)	Tons/Acres Burned (54-56)	AGRICULTURAL FIELD BURNING Acres Burned (57-62)	Tons/Acres Burned (63-65)	FROST CONTROL 10² Orchard Heaters Operating (66-69)	Days/Fired Days/year (70-72)	STRUCTURE FIRES Fires/year (73-77)	Action (78)	(79)	cd (80)
31300	0	3900		224										A	A	5

COMMENTS (10-77)	Action (78)	(79)	cd (80)
		A	6

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NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

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Date Feb 77

FORM APPROVED
OMB NO. 158 R0095

Name of Person Completing Form V. Corbin

State (1–2)	County (3–6)	AQCR (7–9)
36	3580	174

Year of Record (10–11)	SIP EMISSION ESTIMATES (10^2 tons/yr) Particulate (12–16)	SO$_2$ (17–20)	NO$_x$ (21–24)	HC (25–29)	CO (30–34)	SULFUR CONTENT (%) Anth. Coal (35–36)	Bitum. Coal (37–38)	Dist. Oil (39–40)	Resid. Oil (41–42)	ASH CONTENT (%) Anth. Coal (43–45)	Bitum. Coal (46–48)	RESIDENTIAL FUEL Anth. Coal 10^1 tons (49–53)	Bitumin. Coal 10^1 tons (54–59)	Dist. Oil 10^4 Gal. (60–64)	Resid. Oil 10^4 Gal. (65–68)	Nat. Gas 10^7 ft^3 (69–73)	Wood 10^2 tons (74–77)	Action (78)	(79)	cd (80)
74						01	20	03	09	196	90	0	1345	1264	0	332	5	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10^1 tons (10–14)	Bitumin. 10^1 tons (15–19)	Dist. Oil 10^4 Gals. (20–24)	Resid. Oil 10^4 Gals. (25–29)	Nat. Gas 10^7 Ft^3 (30–33)	Wood 10^2 tons (34–35)	INDUSTRIAL FUEL Anth. Coal 10^1 tons (36–41)	Bitum. Coal 10^1 tons (42–47)	Coke 10^1 tons (48–51)	Dist. Oil 10^4 Gals. (52–56)	Resid. Oil 10^4 Gals. (57–61)	Nat. Gas 10^7 Ft^3 (62–66)	Wood 10^2 tons (67–69)	Process Gas 10^7 ft^3 (70–73)	(74–77)	Action (78)	(79)	cd (80)
0	0	170	37	118	0	0	0	0	0	0	233	0	0		A	A	2

ON SITE INCINERATION Residential 10^1 tons (10–15)	Industrial 10^2 tons (16–20)	Comm. Inst. 10^2 tons (21–24)	OPEN BURNING Residential 10^2 tons (25–30)	Industrial 10^2 tons (31–36)	Comm'l-Instit. 10^2 tons (37–41)	GASOLINE FUEL Light Vehicle 10^3 Gals. (42–48)	Heavy Vehicle 10^3 Gals. (49–54)	Off Hiway 10^3 Gals. (55–60)	DIESEL FUEL Heavy Vehicle 10^3 Gals. (61–66)	Off Hiway 10^4 Gals. (67–71)	Rail Locomotive 10^4 Gals. (72–76)	Pop Cd (77)	Action (78)	(79)	cd (80)
				0		47428	13537	1670	9234	126	262	5	A	A	3

AIRCRAFT Military LTO CYC 10^2 (10–13)	Civil LTO CYC 10^1 (14–19)	Commercial LTO CYC 10^1 (20–24)	VESSELS Coal 10^1 tons (25–28)	Diesel Oil 10^4 Gals. (29–32)	Resid. Oil 10^4 Gals. (33–37)	Gasoline 10^3 Gals. (38–41)	EVAPORATION Solvent Purchased tons yr (42–47)	Gasoline Marketed 10^5 Gals. (48–52)	MEASURED VEHICLE MILES Limited Access Road 10^4 Miles (53–58)	Rural Roads 10^4 Miles (59–64)	Suburban Roads 10^4 Miles (65–70)	Urban Roads 10^4 Miles (71–77)	Action (78)	(79)	cd (80)
0	630	5	0	0	0	0	523	627		40300		40300	A	A	4

Dirt Roads Traveled 10^3 Vehicle miles (10–16)	Dirt Air Strips LTO CYCLES (17–21)	Construction Acres (22–27)	Miscellaneous Wind Erosion 10^3 Acres (28–32)	Land Tilling 10^3 Acres (33–37)	FOREST WILDFIRES Acres Burned (38–44)	Tons/acre Burned (45–47)	MANAGED BURNING (Slash/Prescribed Burning) Acres Burned (48–53)	Tons/Acre Burned (54–56)	AGRICULTURAL FIELD BURNING Acres Burned (57–62)	Tons/Acre Burned (63–65)	FROST CONTROL 10^2 Orchard Heaters Operating (66–69)	Days/Fired Days/year (70–72)	STRUCTURE FIRES Fires/year (73–77)	Action (78)	(79)	cd (80)
38100	0	1090		151										A	A	5

COMMENTS (10–77)	Action (78)	(79)	cd (80)
		A	6

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NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
Input Form

FORM APPROVED
OMB NO. 158 R0095

Date Feb 77

Name of Person Completing Form K. Colbin

State		County				AQCR		
1	2	3	4	5	6	7	8	9
2	6	5	7	4	0	1	7	5

Year of Record	SIP EMISSION ESTIMATES (10^2 tons/yr) Particulate	SO$_2$	NO$_x$	HC	CO	SULFUR CONTENT (%) Anth. Coal	Bitum. Coal	Dist. Oil	Resid. Oil	ASH CONTENT (%) Anth. Coal	Bitum. Coal	RESIDENTIAL FUEL Anth. Coal 10^1 tons	Bitumin. Coal 10^1 tons	Dist. Oil 10^4 Gal.	Resid. Oil 10^4 Gal.	Nat. Gas 10^7 ft^3	Wood 10^2 tons	Action		cd
10–11	12–16	17–20	21–24	25–29	30–34	35–36	37–38	39–40	41–42	43–45	46–48	49–53	54–59	60–64	65–68	69–73	74–77	78	79	80
74						07	19	03	19	46	81	0	206	779	0	497	6	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10^1 tons	Bitumin. 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	INDUSTRIAL FUEL Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Coke 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	Process Gas 10^7 ft^3		Action		cd
10–14	15–19	20–24	25–29	30–33	34–35	36–41	42–47	48–51	52–56	57–61	62–66	67–69	70–73	74–77	78	79	80
0	0	444	89	0	0	0	0	0	- 0	0	523	0	0		A	A	2

ON SITE INCINERATION Residential 10^1 tons	Industrial 10^2 tons	Comm. Inst. 10^2 tons	OPEN BURNING Residential 10^2 tons	Industrial 10^2 tons	Comm'l-Instit. 10^2 tons	GASOLINE FUEL Light Vehicle 10^3 Gals.	Heavy Vehicle 10^3 Gals.	Off Hiway 10^3 Gals.	DIESEL FUEL Heavy Vehicle 10^3 Gals.	Off Hiway 10^4 Gals.	Rail Locomotive 10^4 Gals.	Pos Code	Action		cd
10–15	16–20	21–24	25–30	31–36	37–41	42–48	49–54	55–60	61–66	67–71	72–76	77	78	79	80
			0	0	0	54592	11500	1670	7332	126	237	6	A	A	3

AIRCRAFT Military LTO CYC 10^2	Civil LTO CYC 10^1	Commercial LTO CYC 10^1	VESSELS Coal 10^1 tons	Diesel Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Gasoline 10^3 Gals.	EVAPORATION Solvent Purchased tons yr	Gasoline Marketed 10^5 Gals.	MEASURED VEHICLE MILES Limited Access Road 10^4 Miles	Rural Roads 10^4 Miles	Suburban Roads 10^4 Miles	Urban Roads 10^4 Miles	Action		cd
10–13	14–19	20–24	25–28	29–32	33–37	38–41	42–47	48–52	53–58	59–64	65–70	71–77	78	79	80
24	2472	349	0	0	0	0	553	678	42630			42630	A	A	4

Dirt Roads Traveled 10^3 Vehicle-miles	Dirt Air Strips LTO CYCLES	Construction Acres	Miscellaneous Wind Erosion 10^3 Acres	Land Tilling 10^3 Acres	FOREST WILDFIRES Acres Burned	Tons/acres Burned	MANAGED BURNING (Slash/Prescribed Burning) Acres Burned	Tons/Acres Burned	AGRICULTURAL FIELD BURNING Acres Burned	Tons/Acres Burned	FROST CONTROL 10^2 Orchard Heaters Operating	Days/Fired Days/year	STRUCTURE FIRES Fires/year	Action		cd
10–16	17–21	22–27	28–32	33–37	38–44	45–47	48–53	54–56	57–62	63–65	66–69	70–72	73–77	78	79	80
26400	0	911		267							0			A	A	5

COMMENTS	Action		cd
10–77	78	79	80
		A	6

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Zerk

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
Input Form
Date Feb 77

FORM APPROVED
OMB NO. 158 R0299

Name of Person Completing Form: K. Cohen

State (1–2)	County (3–6)	AQCR (7–9)
36	6400	174

Year of Record (10–11)	SIP EMISSION ESTIMATES (10² tons/yr) Particulate (12–16)	SO₂ (17–20)	NOₓ (21–24)	HC (25–29)	CO (30–34)	SULFUR CONTENT (%) Anth. Coal (35–36)	Bitum. Coal (37–38)	Dist. Oil (39–40)	Resid. Oil (41–42)	ASH CONTENT (%) Anth. Coal (43–45)	Bitum. Coal (46–48)	RESIDENTIAL FUEL Anth. Coal 10¹ tons (49–53)	Bitumin. Coal 10¹ tons (54–59)	Dist. Oil 10⁴ Gal. (60–64)	Resid. Oil 10⁴ Gal. (65–68)	Nat. Gas 10⁷ ft.³ (69–73)	Wood 10² tons (74–77)	Action (78)	(79)	cd (80)
74						0▲7	2▲9	1▲0	▲3	11▲6	7▲7	0	2958	1620	0	1519	4	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10¹ tons (10–14)	Bitumin. 10¹ tons (15–19)	Dist. Oil 10⁴ Gals. (20–24)	Resid. Oil 10⁴ Gals. (25–29)	Nat. Gas 10⁷ Ft³ (30–33)	Wood 10² tons (34–35)	INDUSTRIAL FUEL Anth. Coal 10¹ tons (36–41)	Bitum. Coal 10¹ tons (42–47)	Coke 10¹ tons (48–51)	Dist. Oil 10⁴ Gals. (52–56)	Resid. Oil 10⁴ Gals. (57–61)	Nat. Gas 10⁷ Ft³ (62–66)	Wood 10² tons (67–69)	Process Gas 10⁷ ft³ (70–73)	(74–77)	Action (78)	(79)	cd (80)
0	0	1581	218	793	0	0	0	0	0	0	1149	0	0		A	A	2

ON SITE INCINERATION Residential 10¹ tons (10–15)	Industrial 10² tons (16–20)	Comm. Inst. 10² tons (21–24)	OPEN BURNING Residential 10² tons (25–30)	Industrial 10² tons (31–36)	Comm'l-Instit. 10² tons (37–41)	GASOLINE FUEL Light Vehicle 10³ Gals. (42–48)	Heavy Vehicle 10³ Gals. (49–54)	Off Hiway 10³ Gals. (55–60)	DIESEL FUEL Heavy Vehicle 10³ Gals. (61–66)	Off Hiway 10⁴ Gals. (67–71)	Rail Locomotive 10⁴ Gals. (72–76)	Pop Code (77)	Action (78)	(79)	cd (80)
				0		140315	25250	4874	17606	368	370	7	A	A	3

AIRCRAFT Military LTO CYC 10² (10–13)	Civil LTO CYC 10¹ (14–19)	Commercial LTO CYC 10¹ (20–24)	VESSELS Coal 10¹ tons (25–28)	Diesel Oil 10⁴ Gals. (29–32)	Resid. Oil 10⁴ Gals. (33–37)	Gasoline 10³ Gals. (38–41)	EVAPORATION Solvent Purchased tons yr (42–47)	Gasoline Marketed 10⁵ Gals. (48–52)	MEASURED VEHICLE MILES Limited Access Road 10⁴ Miles (53–58)	Rural Roads 10⁴ Miles (59–64)	Suburban Roads 10⁴ Miles (65–70)	Urban Roads 10⁴ Miles (71–77)	Action (78)	(79)	cd (80)
34	9452	1815	0	0	0	0	1527	1710	61795	24200		71652	A	A	4

Dirt Roads Traveled 10³ Vehicle miles (10–16)	Dirt Air Strips LTO CYCLES (17–21)	Construction Acres (22–27)	Miscellaneous Wind Erosion 10³ Acres (28–32)	Land Tilling 10³ Acres (33–37)	FOREST WILDFIRES Acres Burned (38–44)	Tons/acres Burned (45–47)	MANAGED BURNING (Slash/Prescribed Burning) Acres Burned (48–53)	Tons/Acres Burned (54–56)	AGRICULTURAL FIELD BURNING Acres Burned (57–62)	Tons/Acres Burned (63–65)	FROST CONTROL 10² Orchard Heaters Operating (66–69)	Days/Fixed Days/year (70–72)	STRUCTURE FIRES Fires/year (73–77)	Action (78)	(79)	cd (80)
63500	250	2580		266										A	A	5

COMMENTS (10–77)	Action (78)	(79)	cd (80)
		A	6

EPA (Dur) 219
3/72

Summit

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
Input Form
Date Feb 77

FORM APPROVED
OMB NO. 158 R0095

Name of Person Completing Form V. Corbin

State (1-2)	County (3-6)	AQCR (7-9)
36	6500	174

Year of Record	SIP EMISSION ESTIMATES (10^2 tons/yr) Particulate	SO$_2$	NO$_x$	HC	CO	SULFUR CONTENT (%) Anth. Coal	Bitum. Coal	Dist. Oil	Resid. Oil	ASH CONTENT (%) Anth. Coal	Bitum. Coal	Anth. Coal 10^1 tons	Bitumin. Coal 10^1 tons	RESIDENTIAL FUEL Dist. Oil 10^4 Gal.	Resid. Oil 10^4 Gal.	Nat. Gas 10^7 ft^3	Wood 10^2 tons	Action		cd
10-11	12-16	17-20	21-24	25-29	30-34	35-36	37-38	39-40	41-42	43-45	46-48	49-53	54-59	60-64	65-68	69-73	74-77	78	79	80
74						01	36	01	07	146	122	0	1082	1580	0	2417	0	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL Anth. 10^1 tons	Bitumin. 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	INDUSTRIAL FUEL Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Coke 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft^3	Wood 10^2 tons	Process Gas 10^7 ft^3	Action		cd
10-14	15-19	20-24	25-29	30-33	34-35	36-41	42-47	48-51	52-56	57-61	62-66	67-69	70-73	78	79	80
0	0	1539	310	1102	0	0	0	0	0	0	2224	0	0	A	A	2

ON SITE INCINERATION Residential 10^1 tons	Industrial 10^2 tons	Comm. Inst. 10^2 tons	OPEN BURNING Residential 10^2 tons	Industrial 10^2 tons	Comm'l - Instit'l. 10^2 tons	GASOLINE FUEL Light Vehicle 10^3 Gals.	Heavy Vehicle 10^3 Gals.	Off Hiway 10^3 Gals.	DIESEL FUEL Heavy Vehicle 10^3 Gals.	Off Hiway 10^4 Gals.	Rail Locomotive 10^4 Gals.	Pop Code	Action		cd
10-15	16-20	21-24	25-30	31-36	37-41	42-48	49-54	55-60	61-66	67-71	72-76	77	78	79	80
				0		215550	32087	7071	21859	535	350	4	A	A	3

AIRCRAFT Military LTO CYC 10^2	Civil LTO CYC 10^1	Commercial LTO CYC 10^1	VESSELS Coal 10^1 tons	Diesel Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Gasoline 10^3 Gals.	EVAPORATION Solvent Purchased tons yr	Gasoline Marketed 10^5 Gals.	MEASURED VEHICLE MILES Limited Access Road 10^4 Miles	Rural Roads 10^4 Miles	Suburban Roads 10^4 Miles	Urban Roads 10^4 Miles	Action		cd
10-13	14-19	20-24	25-28	29-32	33-37	38-41	42-47	48-52	53-58	59-64	65-70	71-77	78	79	80
86	117392	967	0	0	0	0	9927	2550	137489	26025		122604	A	A	4

Dirt Roads Traveled 10^3 Vehicle miles	Dirt Air Strips LTO CYCLES	Construction Acres	Miscellaneous Wind Erosion 10^3 Acres	Land Tilling 10^3 Acres	FOREST WILDFIRES Acres Burned	Tons/acre Burned	MANAGED BURNING (Slash Prescribed Burning) Acres Burned	Tons/Acre Burned	AGRICULTURAL FIELD BURNING Acres Burned	Tons/Acre Burned	FROST CONTROL 10^2 Orchard Heaters Operating	Days/Fixed Days/year	STRUCTURE FIRES Fires/year	Action		cd
10-16	17-21	22-27	28-32	33-37	38-44	45-47	48-53	54-56	57-62	63-65	66-69	70-72	73-77	78	79	80
34400	0	3710		37										A	A	5

COMMENTS	Action		cd
10-77	78	79	80
		A	6

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NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
Input Form
Date Feb 77

FORM APPROVED
OMB NO. 158 R0095

Name of Person Completing Form V. Corbin

State 1-2	County 3-6	AQCR 7-9
36	7640	077

	SIP EMISSION ESTIMATES (10^2 tons/yr)					SULFUR CONTENT (%)				ASH CONTENT (%)				RESIDENTIAL FUEL				Action		cd
Year of Record 10-11	Particulate 12-16	SO_2 17-20	NO_x 21-24	HC 25-29	CO 30-34	Anth. Coal 35-36	Bitum. Coal 37-38	Dist. Oil 39-40	Resid Oil 41-42	Anth. Coal 43-45	Bitum. Coal 46-48	Anth Coal 10^1 tons 49-53	Bitum Coal 10^1 tons 54-59	Dist. Oil 10^4 Gal. 60-64	Resid. Oil 10^4 Gal. 65-68	Nat. Gas 10^7 ft^3 69-73	Wood 10^2 tons 74-77	78	79	80
74						07	35	01	29	156	106	0	302	1238	0	199	5	A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL						INDUSTRIAL FUEL									Action		cd
Anth. 10^1 tons 10-14	Bitumin. 10^1 tons 15-19	Dist. Oil 10^4 Gals. 20-24	Resid. Oil 10^4 Gals. 25-29	Nat. Gas 10^7 Ft^3 30-33	Wood 10^2 tons 34-35	Anth. Coal 10^1 tons 36-41	Bitum. Coal 10^1 tons 42-47	Coke 10^1 tons 48-51	Dist. Oil 10^4 Gals. 52-56	Resid Oil 10^4 Gals. 57-61	Nat. Gas 10^7 Ft^3 62-66	Wood 10^2 tons 67-69	Process Gas 10^7 ft^3 70-73	74-77	78	79	80
0	0	51	19	32	0	0	0	0	0	0	75	0	0		A	A	2

ON SITE INCINERATION			OPEN BURNING			GASOLINE FUEL			DIESEL FUEL				Action		cd
Residential 10^1 tons 10-15	Industrial 10^2 tons 16-20	Comm. Inst. 10^2 tons 21-24	Residential 10^2 tons 25-30	Industrial 10^2 tons 31-36	Comm'l-Instit'l. 10^2 tons 37-41	Light Vehicle 10^3 Gals. 42-48	Heavy Vehicle 10^3 Gals. 49-54	Off Hiway 10^3 Gals. 55-60	Heavy Vehicle 10^3 Gals. 61-66	Off Hiway 10^4 Gals. 67-71	Rail Locomotive 10^4 Gals. 72-76	Reg. Cat. 77	78	79	80
				0		32326	2347	1110	5617	29	83	4	A	A	3

AIRCRAFT			VESSELS				EVAPORATION		MEASURED VEHICLE MILES				Action		cd
Military LTO CYC 10^2 10-13	Civil LTO CYC 10^1 14-19	Commercial LTO CYC 10^1 20-24	Coal 10^1 tons 25-28	Diesel Oil 10^4 Gals. 29-32	Resid. Oil 10^4 Gals. 33-37	Gasoline 10^3 Gals. 38-41	Solvent Purchased tons yr 42-47	Gasoline Marketed 10^5 Gals. 48-52	Limited Access Road 10^4 Miles 53-58	Rural Roads 10^4 Miles 59-64	Suburban Roads 10^4 Miles 65-70	Urban Roads 10^4 Miles 71-77	78	79	80
0	2465	00	0	0	0	0	132	419	38576	19297		1911	A	A	4

					FOREST WILDFIRES		MANAGED BURNING (Slash Prescribed Burning)		AGRICULTURAL FIELD BURNING		FROST CONTROL 10^2		STRUCTURE FIRES	Action		cd
Dirt Roads Traveled 10^3 Vehicle miles 10-16	Dirt Air Strips LTO CYCLES 17-21	Construction Acres 22-27	Wind Erosion 10^3 Acres 28-32	Land Tilling 10^3 Acres 33-37	Acres Burned 38-44	Tons/Acres Burned 45-47	Acres Burned 48-53	Tons/Acres Burned 54-56	Acres Burned 57-62	Tons/Acres Burned 63-65	Orchard Heaters Operating 66-69	Days/Fired Days/year 70-72	Fires/year 73-77	78	79	80
31700	0	747		235										A	A	5

COMMENTS 10-77	Action 78	79	cd 80
		A	6

EPA (Dur) 219
3/72

NATIONAL EMISSIONS DATA SYSTEM (NEDS)
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS

AREA SOURCE
Input Form
Date Feb 77

FORM APPROVED
OMB NO. 158-R0095

Name of Person Completing Form V. Cohen

State	County	AQCR
1 2	3 4 5 6	7 8 9
26	7580	127

Year of Record	Particulate	SO2	NOx	HC	CO	Sulfur Content (%) Anth. Coal	Sulfur Content (%) Bitum. Coal	Sulfur Content (%) Dist. Oil	Sulfur Content (%) Resid. Oil	Ash Content (%) Anth. Coal	Ash Content (%) Bitum. Coal	Anth. Coal 10^1 tons	Bitumin. Coal 10^1 tons	Residential Fuel Dist. Oil 10^4 Gal.	Resid. Oil 10^4 Gal.	Nat. Gas 10^7 ft.3	Wood 10^2 tons	Action		cd
10 11	12–16	17–20	21–24	25–29	30–34	35 36	37 38	39 40	41 42	43–45	46–48	49–53	54–59	60–64	65–68	69–73	74–77	78	79	80
74						55	27	53	11	46	68	0	392	719	0	378		A	A	1

COMMERCIAL AND INSTITUTIONAL FUEL / INDUSTRIAL FUEL

Anth. 10^1 tons	Bitumin. 10^1 tons	Dist. Oil 10^4 Gals.	Resid. Oil 10^1 Gals.	Nat. Gas 10^7 Ft3	Wood 10^2 tons	Anth. Coal 10^1 tons	Bitum. Coal 10^1 tons	Coke 10^1 tons	Dist. Oil 10^4 Gals	Resid. Oil 10^4 Gals.	Nat. Gas 10^7 Ft.3	Wood 10^2 tons	Process Gas 10^7 ft3		Action		cd
10–14	15–19	20–24	25–29	30–33	34 35	36–41	42–47	48–51	52–56	57–61	62–66	67–69	70–73	74–77	78	79	80
0	0	239	48	172	0	0	0	0	0	0	67	0	0		A	A	2

ON SITE INCINERATION / OPEN BURNING / GASOLINE FUEL / DIESEL FUEL

Residential 10^1 tons	Industrial 10^2 tons	Comm. Inst. 10^2 tons	Open Burning Residential 10^2 tons	Industrial 10^2 tons	Comm'l. Inst'l. 10^2 tons	Light Vehicle 10^3 Gals.	Heavy Vehicle 10^3 Gals	Off Hiway 10^3 Gals	Diesel Heavy Vehicle 10^3 Gals.	Off Hiway 10^4 Gals.	Rail Locomotive 10^4 Gals.	Pos Con	Action		cd
10–15	16–20	21–24	25–30	31–36	37–41	42–48	49–54	55–60	61–66	67–71	72–76	77	78	79	80
				8		34243	2532	1246	3815	99	298	5	A	A	3

AIRCRAFT / VESSELS / EVAPORATION / MEASURED VEHICLE MILES

Military LTO CYC 10^2	Civil LTO CYC 10^1	Commercial LTO CYC 10^1	Vessels Coal 10^1 tons	Diesel Oil 10^4 Gals.	Resid. Oil 10^4 Gals.	Gasoline 10^3 Gals	Solvent Purchased tons yr	Gasoline Marketed 10^5 Gals	Limited Access Road 10^4 Miles	Rural Roads 10^4 Miles	Suburban Roads 10^4 Miles	Urban Roads 10^4 Miles	Action		cd
10–13	14–19	20–24	25–28	29–32	33–37	38–41	42–47	48–52	53–58	59–64	65–70	71–77	78	79	80
1	4629	57	0	0	0	0	176	991		28422		28422	A	A	4

Dirt Roads Traveled 10^3 Vehicle miles	Dirt Air Strips LTO CYCLES	Construction Acres	Miscellaneous Wind Erosion 10^3 Acres	Land Tilling 10^3 Acres	Forest Wildfires Acres Burned	Tons/Acres Burned	Managed Burning (Slash Prescribed Burning) Acres Burned	Tons/Acres Burned	Agricultural Field Burning Acres Burned	Tons/Acres Burned	Frost Control 10^2 Orchard Heaters Operating	Days/Fired Days/year	Structure Fires Fires/year	Action		cd
10–16	17–21	22–27	28–32	33–37	38–44	45–47	48–53	54–56	57–62	63–65	66–69	70–72	73–77	78	79	80
27900	0	769		241										A	A	5

COMMENTS	Action		cd
10–77	78	79	80
		A	6

EPA (Dur) 219
8/72

APPENDIX D

EMISSION SOURCES FOR THE AKRON/CANTON AQMA

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                                            CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID          X(KM)        Y(KM)          TX(M)    SO2(G/SEC)    TSP(G/SEC)    MS(M)       D(M)    VS(M/SEC)     TS(DC)    SA(M**2/SEC)
P 5001        498.30      4550.20          0.0          0.0          0.115      12.20       0.0          0.0       10.00        0.0
P 5002        475.70      4566.20          0.0          0.0          1.123      21.30       1.80         0.90     148.90        0.0
P 5006        469.70      4576.90          0.0          0.0          4.031      15.80       0.80         8.00     121.10        0.0
P 5010        498.50      4568.90          0.0          0.0          6.449       6.10       0.80        21.70      87.80        0.0
P 5011        470.80      4558.70          0.0          0.0          1.209      14.60       1.20        10.10     148.90        0.0
P 5013        470.80      4555.40          0.0          1.497        0.864      38.10       2.40         4.80     260.00        0.0
P 5013        470.80      4555.40          0.0          0.806        0.432      61.60       2.90         1.70     260.00        0.0
P 5013        470.80      4555.40          0.0          0.806        0.432      61.60       2.90         1.70     260.00        0.0
P 5014        477.60      4567.50          0.0          0.0          4.405       7.60       2.10         6.90     148.90        0.0
P 5015        475.90      4572.10          0.0          0.0          0.864       6.10       0.60        22.60     148.90        0.0
P 5016        479.40      4555.20          0.0          0.0          4.895      11.30       1.20         0.0      -17.80        0.0
P 5018        496.40      4564.30          0.0          0.0          0.029      13.70       1.30        16.70      21.10        0.0
P 5018        496.40      4564.30          0.0          0.0          0.086       6.10       0.50        20.60      26.70        0.0
P 5018        496.50      4564.20          0.0          0.0          0.806       8.80       0.30        14.20     232.20        0.0
P 5001        472.10      4521.00          0.0          0.0          0.144      15.20       1.20        12.90      67.80        0.0
P 5001        472.10      4521.00          0.0          0.0          0.144      15.20       1.20        12.90      67.80        0.0
P 5002        478.90      4525.50          0.0          4.204        1.180      35.10       1.80         0.50     204.40        0.0
P 5003        457.70      4515.00          0.0         12.496       15.980      61.00       4.90         0.0      190.60        0.0
P 5003        457.70      4515.00          0.0         16.642       21.277      61.00       4.90         0.0      190.60        0.0
P 5037        450.10      4516.70          0.0          0.0          0.029       4.30       0.0          0.0      -17.80        0.0
P 5004        463.20      4514.50          0.0         27.813        0.115      62.50       3.00         0.60      37.80        0.0
P 5004        463.20      4514.50          0.0          0.921        0.202      62.50       3.00         0.60      37.80        0.0
P 5004        463.20      4514.50          0.0          0.921        0.202      62.50       3.00         0.60      37.80        0.0
P 5005        472.80      4527.60          0.0          0.0          0.029      23.80       0.60         4.90      23.90        0.0
P 5005        472.80      4527.60          0.0          0.0          1.468      26.20       1.40         9.00      23.90        0.0
P 5005        472.80      4527.60          0.0          0.0          1.468      25.90       0.70        24.70      43.30        0.0
P 5005        472.80      4527.60          0.0          0.0          1.468      21.90       2.00         5.20      37.80        0.0
P 5005        472.80      4527.60          0.0         92.509      190.459      28.00       5.50         4.30     204.40        0.0
P 5005        472.80      4527.60          0.0         30.836      317.432      27.40       2.50         5.90     648.90        0.0
P 5005        472.80      4527.60          0.0         30.836      317.432      27.40       2.50         5.90     648.90        0.0
P 5005        472.80      4527.60          0.0         30.836      317.432      28.00       1.80        19.20     371.10        0.0
P 5038        451.80      4519.00          0.0          0.0          2.447      12.20       0.0          0.0       21.10        0.0
P 5039        475.50      4519.70          0.0          0.0          1.008      11.60       3.80         0.0       93.30        0.0
P 5006        456.50      4510.00          0.0          0.0        100.772      15.20       1.20        21.80      93.30        0.0
P 5007        472.20      4516.50          0.0          8.465        1.065      21.30       1.50        11.10     260.00        0.0
P 5007        472.20      4516.50          0.0          7.515        6.392      21.30       1.50        11.10    2760.00        0.0
P 5007        472.20      4516.50          0.0         24.444        3.023      21.30       1.50        11.10    2760.00        0.0
P 5007        472.20      4516.50          0.0         24.444        3.110      21.30       1.50         0.0      260.00        0.0
P 5008        464.80      4513.40          0.0          9.242        0.893      55.50       3.10         4.20     315.60        0.0
P 5008        464.80      4513.40          0.0          2.822        0.259      45.70       1.60         9.20     471.10        0.0
P 5008        454.80      4513.40          0.0          4.117        0.403      51.80       2.10         3.00     260.00        0.0
P 5008        464.80      4513.40          0.0          3.473        0.374      51.80       1.70         7.60     426.70        0.0
P 5008        464.80      4513.40          0.0          1.843        0.029      15.20       0.80        18.60     282.20        0.0
P 5008        464.80      4513.40          0.0         11.027        0.893      30.50       1.40        17.20     282.20        0.0
P 5008        464.80      4513.40          0.0         18.744        0.0        12.80       1.20         0.80     276.70        0.0
P 5008        464.80      4513.40          0.0         60.895        0.0        54.90       0.60         4.70     593.30        0.0
P 5008        464.80      4513.40          0.0         52.805        0.518      45.70       1.00        42.50    3382.20        0.0
P 5009        463.70      4523.80          0.0          0.0          0.317      14.30       1.80         7.60      75.00        0.0
P 5042        454.90      4511.00          0.0          2.332        0.0         9.10       0.50        22.00     232.20        0.0
P 5042        454.90      4511.00          0.0          2.332        0.0         9.10       0.50        22.00     232.20        0.0
P 5010        470.20      4514.50          0.0          0.720        1.353       4.00       0.60        12.30      65.60        0.0
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                                                  CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID         X(KM)       Y(KM)       TX(M)   SO2(G/SEC)   TSP(G/SEC)    HS(M)      D(M)   VS(M/SEC)    TS(DC)    SA(M**2/SEC)
P 5011       463.00     4513.30       0.0         3.282        3.023     42.70      4.90        0.10    232.20        0.0
P 5011       463.00     4513.30       0.0         3.282        3.023     42.70      4.90        0.10    232.20        0.0
P 5012       464.00     4512.80       0.0        14.684        4.492     56.40      1.80        0.30    204.40        0.0
P 5012       464.00     4512.80       0.0        14.684        4.492     56.40      1.80        0.30    204.40        0.0
P 5012       466.40     4514.00       0.0         0.0          2.246     18.60      0.0         0.0      21.10        0.0
P 5091       468.90     4511.00       0.0         0.0         16.843     15.20      0.0         0.0     -17.80        0.0
P 5013       456.50     4507.00       0.0         0.0          0.058      9.10      0.80       31.00     93.30        0.0
P 5044       466.40     4514.00       0.0         0.0          1.065     12.20      1.10        1.50     21.10        0.0
P 5014       476.70     4514.50       0.0         0.0          0.086     15.20      0.0         0.0      10.00        0.0
P 5014       476.70     4514.50       0.0         0.0          0.086     15.20      0.0         0.0      10.00        0.0
P 5014       476.70     4514.50       0.0         0.0          0.029     15.20      0.60       16.20     10.00        0.0
P 5014       476.70     4514.50       0.0         0.0          0.230      0.0       0.0         0.0      10.00        0.0
P 5014       476.70     4514.50       0.0         0.0          0.346      0.0       0.0         0.0      10.00        0.0
P 5014       476.70     4514.50       0.0         0.0          0.346      0.0       0.0         0.0      10.00        0.0
P 5014       476.70     4514.50       0.0         0.0          0.346      0.0       0.0         0.0      10.00        0.0
P 5014       476.70     4514.50       0.0         0.0          0.346     15.20      0.0         0.0      10.00        0.0
P 5014       476.70     4514.50       0.0         0.0          0.346     15.20      0.0         0.0      10.00        0.0
P 5014       476.70     4514.50       0.0         0.0          0.346     15.20      0.0         0.0      10.00        0.0
P 5014       476.70     4514.50       0.0        31.642        0.633      6.10      1.20       16.20    176.70        0.0
P 5014       476.70     4514.50       0.0        31.642        0.633      6.10      1.20       16.20    176.70        0.0
P 5014       476.70     4514.50       0.0        31.642        0.230      6.10      1.20       16.20    176.70        0.0
P 5014       476.70     4514.50       0.0         6.824        0.633      9.10      1.20        3.50    176.70        0.0
P 5014       476.70     4514.50       0.0         6.824        0.633      9.10      1.20        3.50    176.70        0.0
P 5014       476.70     4514.50       0.0        31.642        0.633      6.10      1.20       16.20    176.70        0.0
P 5014       476.70     4514.50       0.0        31.642        0.633      6.10      1.20       16.20    176.70        0.0
P 5014       476.70     4514.50       0.0         6.824        0.633      9.10      1.20        3.50    176.70        0.0
P 5045       469.00     4511.50       0.0         0.489        0.173     14.30      0.50       20.70    107.20        0.0
P 5045       469.00     4511.50       0.0         0.489        0.173     14.30      0.50       20.70    107.20        0.0
P 5015       457.20     4512.50       0.0         0.518        0.720     61.00      2.70        4.00    287.80        0.0
P 5015       457.20     4512.50       0.0         0.518        0.720     61.00      2.70        4.00    260.00        0.0
P 5015       457.20     4512.50       0.0         1.238        1.440     61.00      2.70        4.00    287.80        0.0
P 5096       492.60     4529.40       0.0         0.0          0.202     14.00      1.80       14.40    121.10        0.0
P 5016       490.40     4530.10       0.0        22.515        4.607     57.90      4.00        0.40    176.70        0.0
P 5016       490.40     4530.10       0.0         1.699        0.346     57.90      4.00        0.20    176.70        0.0
P 5016       490.40     4530.10       0.0         1.699        0.346     57.90      4.00        0.20    176.70        0.0
P 5016       490.40     4530.10       0.0         1.699        0.346     57.90      4.00        0.20    176.70        0.0
P 5016       490.40     4530.10       0.0        22.515        4.607     57.90      4.00        0.40    176.70        0.0
P 5018       491.80     4530.50       0.0         8.753        9.444     45.70      2.10        5.50    148.90        0.0
P 5018       491.80     4530.50       0.0         8.753        9.444     45.70      2.10        5.50    148.90        0.0
P 5019       490.70     4531.30       0.0         0.835        0.202     27.40      0.60        0.10    176.70        0.0
P 5067       453.60     4499.80       0.0         0.0          0.720     12.20      0.0         0.0     -17.80        0.0
P 5021       448.20     4507.30       0.0         2.908        7.457     40.50      2.90        0.50    148.90        0.0
P 5021       448.20     4507.30       0.0         2.908        7.457     40.50      2.90        0.50    148.90        0.0
P 5022       465.50     4513.50       0.0         0.0         30.232     15.20      1.20       12.40     67.80        0.0
P 5023       471.60     4517.50       0.0         0.403        2.188     24.10      1.20       11.30    396.10        0.0
P 5069       471.90     4517.80       0.0        10.192       11.286     38.10      1.70        0.0     204.40        0.0
P 5092       471.80     4517.50       0.0         0.0          0.749     12.20      0.0         0.0      21.10        0.0
P 5024       467.50     4516.00       0.0         3.052        0.230     25.90      1.40        1.30    148.90        0.0
P 5024       467.50     4516.00       0.0         1.612        0.115     25.90      1.40        1.30    148.90        0.0
P 5090       469.50     4521.50       0.0         0.0          0.374     12.20      1.10        2.70    148.90        0.0
P 5026       464.00     4512.90       0.0        42.324       12.956     50.00      3.30        1.60    260.00        0.0
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                                        CDMI VERSION 76130,  RUN      1
SOURCE INPUT
   ID        X(KM)       Y(KM)       TX(M)   SO2(G/SEC)  TSP(G/SEC)   HS(M)      D(M)    VS(M/SEC)    TS(DC)   SA(M**2/SEC)
P 5026      466.50      4513.80      0.0        0.0        0.173      27.40      1.20      20.20      37.80       0.0
P 5026      466.50      4513.80      0.0        0.0        0.374      27.40      1.20      20.20      37.80       0.0
P 5026      466.50      4513.80      0.0        0.0        0.173      27.40      1.20      20.20      37.80       0.0
P 5026      466.50      4513.80      0.0        0.0        1.756      27.40      1.20      20.20      37.80       0.0
P 5026      466.50      4513.80      0.0        0.0        1.785      27.40      1.20      20.20      37.80       0.0
P 5026      466.50      4513.80      0.0        0.0        0.374      27.40      1.20      20.20      37.80       0.0
P 5026      466.50      4513.80      0.0        0.0        0.115      27.40      1.20      20.20      37.80       0.0
P 5026      466.40      4514.00      0.0        0.0        0.029      18.60      0.0        0.0       21.10       0.0
P 5026      466.40      4514.00      0.0        0.0        0.058      18.60      0.0        0.0       21.10       0.0
P 5026      466.50      4513.80      0.0        0.0        0.029      16.20      0.0        0.0      -17.80       0.0
P 5027      470.70      4517.00      0.0        2.505      0.0        70.10      2.10       1.50     221.10       0.0
P 5027      470.70      4517.00      0.0        0.0       10.451      15.20      0.0        0.0      121.10       0.0
P 5027      470.70      4517.00      0.0        0.0      113.613      15.20      0.0        0.0      121.10       0.0
P 5027      470.70      4517.00      0.0        0.0        1.209      30.50      0.0        0.0       93.30       0.0
P 5027      470.70      4517.00      0.0        0.0        1.209      30.50      0.0        0.0       93.30       0.0
P 5027      470.70      4517.00      0.0        0.0        1.209      30.50      0.0        0.0       93.30       0.0
P 5027      470.70      4517.00      0.0        0.0        1.209      30.50      0.0        0.0       93.30       0.0
P 5027      470.70      4517.00      0.0        0.0        1.209      30.50      0.0        0.0       93.30       0.0
P 5027      470.70      4517.00      0.0        0.0        1.209      30.50      0.0        0.0       93.30       0.0
P 5027      470.70      4517.00      0.0        0.0       10.451      15.20      0.0        0.0      121.10       0.0
P 5027      470.70      4517.00      0.0        0.0       10.451      15.20      0.0        0.0      121.10       0.0
P 5027      470.70      4517.00      0.0        0.0       10.451      15.20      0.0        0.0      121.10       0.0
P 5027      470.70      4517.00      0.0        0.0       10.451      15.20      0.0        0.0      121.10       0.0
P 5027      470.70      4517.00      0.0        0.0      113.613      15.20      0.0        0.0      121.10       0.0
P 5027      470.70      4517.00      0.0        0.0      113.613      15.20      0.0        0.0      121.10       0.0
P 5027      470.70      4517.00      0.0        0.0      113.613      15.20      0.0        0.0      121.10       0.0
P 5027      470.70      4517.00      0.0        2.505      0.0        70.10      2.10       1.50     221.10       0.0
P 5027      470.70      4517.00      0.0        2.505      0.0        70.10      2.10       1.50     221.10       0.0
P 5054      474.80      4514.00      0.0        0.086      0.950      11.00      1.40       6.60     315.60       0.0
P 5054      474.80      4514.00      0.0        0.0        0.058      15.20      0.0        0.0      -17.80       0.0
P 5054      474.80      4514.00      0.0        0.0        0.058      15.20      0.0        0.0      -17.80       0.0
P 5054      474.80      4514.00      0.0        0.0        0.086      15.20      0.0        0.0      -17.80       0.0
P 5054      474.80      4514.00      0.0        0.086      0.950      11.00      1.40       0.70     315.60       0.0
P 5054      474.80      4514.00      0.0        0.086      0.950      11.00      1.40       6.60     315.60       0.0
P 5054      474.80      4514.00      0.0        0.0        0.029       0.0       0.0        0.0      -17.80       0.0
P 5054      474.80      4514.00      0.0        0.0        0.086      15.20      0.0        0.0      -17.80       0.0
P 5079      469.50      4501.70      0.0        0.0        0.029      15.20      0.60      16.20      10.00       0.0
P 5079      469.50      4501.70      0.0        0.0        0.029      15.20      0.60      16.20      10.00       0.0
P 5079      469.50      4501.70      0.0        0.0        0.777      15.20      0.0        0.0       10.00       0.0
P 5030      471.70      4534.50      0.0        3.110      0.317      45.70      1.50       1.00     190.60       0.0
P 5030      471.70      4534.50      0.0        3.110      0.317      45.70      1.50       1.00     190.60       0.0
P 5030      471.70      4534.50      0.0        6.219      4.290      45.70      1.50       1.80     190.60       0.0
P 5080      468.60      4531.50      0.0        0.0        2.591      15.20      0.0        0.0       10.00       0.0
P 5080      468.80      4531.40      0.0        0.0        5.470      15.20      0.0        0.0      -17.80       0.0
P 5031      455.30      4521.00      0.0        0.0        0.086      15.20      1.20      12.30      93.30       0.0
P 5095      455.30      4515.60      0.0        0.0        0.720      18.30      0.50      16.00      21.10       0.0
P 5082      455.30      4514.30      0.0        0.0       12.784       3.70      0.0        0.0      -17.80       0.0
P 5083      455.90      4513.80      0.0        0.0        0.029       7.60      0.0        0.0      -17.80       0.0
P 5033      455.00      4513.30      0.0       10.106      5.528      89.90      5.70       0.60     243.30       0.0
P 5033      455.00      4513.30      0.0       10.106      7.227      89.90      5.70       0.60     243.30       0.0
P 5033      455.00      4513.30      0.0       10.106      7.227      89.90      5.70       0.60     243.30       0.0
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                                                      CCMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID          X(KM)        Y(KM)        TX(M)   SO2(G/SEC)   TSP(G/SEC)    HS(M)       D(M)    VS(M/SEC)    TS(OC)    SA(M**2/SEC)
P 5033        455.00       4513.30        0.0       10.106        7.227       89.90       5.70       0.60      243.30       0.0
P 5033        455.00       4513.30        0.0       10.106        7.227       89.90       5.70       0.60      243.30       0.0
P 5033        455.00       4513.30        0.0       10.106        7.227       89.90       5.70       0.60      243.30       0.0
P 5033        455.00       4513.30        0.0       13.590       11.891       76.20       3.40       0.30       21.10       0.0
P 5087        455.40       4507.00        0.0        0.0          0.173        0.0        0.0        0.0       -17.80       0.0
P 5035        463.50       4525.10        0.0        0.0          4.031       15.20       1.40      10.20       93.30       0.0
P 5036        466.10       4524.90        0.0        0.777        0.605       53.30       2.40       2.50      176.70       0.0
P 5089        478.20       4502.30        0.0        0.0          0.115       15.20       0.0        0.0       -17.80       0.0
P 5001        463.80       4540.60        0.0        1.958        0.173       50.30       1.20       0.80      260.00       0.0
P 5001        463.80       4540.60        0.0        1.958        0.173       50.30       1.20       0.80      260.00       0.0
P 5004        454.00       4565.80        0.0        0.0          0.115       12.20       0.0        0.0       -17.80       0.0
P 5157        463.40       4562.10        0.0        1.296        0.173       21.30       1.10       5.30      193.30       0.0
P 5157        463.40       4562.10        0.0        1.958        0.259       21.30       1.40       4.80      232.20       0.0
P 5157        463.40       4562.10        0.0        1.296        0.173       21.30       1.10       5.30      193.30       0.0
P 5010        451.80       4577.50        0.0       25.999        8.724       53.30       3.00       2.20      260.00       0.0
P 5012        452.90       4570.50        0.0        6.565        6.133       11.00       1.50      11.30      315.60       0.0
P 5012        452.90       4570.50        0.0        6.565        6.133       11.00       1.50      11.30      315.60       0.0
P 5012        452.90       4570.50        0.0        6.565        6.133       11.00       1.40       6.70      304.40       0.0
P 5012        452.90       4570.50        0.0        1.123        0.662        9.10       0.60      42.90      204.40       0.0
P 5012        452.90       4570.50        0.0        1.123        0.662        9.10       0.60      42.90      204.40       0.0
P 5024        454.60       4543.20        0.0        0.0          0.202        3.00       1.10       0.50       26.70       0.0
P 5160        458.00       4547.50        0.0        0.0          0.058        7.00       0.90       5.80       93.30       0.0
P 5161        457.80       4546.60        0.0        0.0          1.037        8.80       1.60       7.90       21.10       0.0
P 5161        457.80       4546.60        0.0        0.0          0.288        9.80       1.00       5.60       21.10       0.0
P 5161        457.80       4546.60        0.0        0.0          0.432        6.40       1.00       8.40       21.10       0.0
P 5161        457.80       4546.60        0.0        0.0          0.489        6.70       0.90      17.20      -17.80       0.0
P 5161        457.80       4546.60        0.0        0.0          0.144        5.50       0.50      14.00       21.10       0.0
P 5025        459.10       4551.80        0.0        0.0          0.115        5.50       0.90      42.90      148.90       0.0
P 5027        458.80       4551.80        0.0      187.148       13.100       83.80       3.40      10.90      194.40       0.0
P 5027        458.80       4551.80        0.0      196.361        1.411       83.80       3.40      10.90      172.80       0.0
P 5028        456.60       4548.50        0.0        7.400        3.772       53.30       3.00       6.40      279.40       0.0
P 5028        456.60       4548.50        0.0        7.400        3.772       53.30       3.00       6.40      279.40       0.0
P 5028        456.60       4548.50        0.0        8.868        4.520       53.30       3.00       6.30      241.10       0.0
P 5028        456.60       4548.50        0.0        7.975        4.088       53.30       3.00       6.30      241.10       0.0
P 5028        456.60       4548.50        0.0       28.648        5.750       53.30       3.00       5.80      204.40       0.0
P 5028        456.60       4548.50        0.0       29.368        5.874       53.30       3.00       5.80      204.40       0.0
P 5030        454.40       4543.50        0.0       33.687       12.870       53.30       1.10      11.40      343.30       0.0
P 5030        454.40       4543.50        0.0       33.687       12.870       53.30       1.10      11.40      343.30       0.0
P 5030        454.40       4543.50        0.0       33.687       12.870       53.30       1.10      11.40      343.30       0.0
P 5030        454.50       4543.50        0.0       33.687       12.870       53.30       1.10      11.40      343.30       0.0
P 5030        454.40       4543.50        0.0        0.0          0.720        0.0        0.0        0.0       -17.80       0.0
P 5030        454.40       4543.50        0.0        0.0          0.173        8.20       0.20      11.00       21.10       0.0
P 5030        454.40       4543.50        0.0        0.0          1.555       14.30       0.60       6.40       46.10       0.0
P 5030        454.40       4543.50        0.0        0.0          0.979       18.30       3.40       0.50       93.30       0.0
P 5032        454.40       4543.90        0.0       50.098        4.060       38.10       1.50      11.60      198.90       0.0
P 5034        455.60       4546.70        0.0       52.977        5.067       76.20       4.90       1.80      256.10       0.0
P 5034        455.60       4546.70        0.0       86.674        8.494       76.20       4.90       3.00      235.60       0.0
P 5034        455.60       4546.70        0.0       64.206        6.101       76.20       4.90       2.60      233.90       0.0
P 5034        456.00       4547.00        0.0        0.0          0.058       36.60       3.00       1.10       34.40       0.0
P 5036        458.40       4548.60        0.0        0.0          0.086       26.80       1.20       6.50      176.70       0.0
P 5036        458.40       4548.60        0.0        0.0          0.058       24.40       1.20      12.90      176.70       0.0
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                                              CDM1 VERSION 76130,  RUN    1
SOURCE INPUT
   ID         X(KM)       Y(KM)       TX(M)   SO2(G/SEC)  TSP(G/SEC)    HS(M)        D(M)    VS(M/SEC)     TS(DC)   SA(M**2/SEC)
P 5038       460.40      4541.90       0.0       1.008       0.202      19.50        1.20        7.80      265.60        0.0
P 5038       460.40      4541.90       0.0       1.008       0.202      19.50        1.20        7.80      265.60        0.0
P 5038       460.40      4541.90       0.0       1.008       0.202      19.50        1.20        7.80      265.60        0.0
P 5038       460.40      4541.90       0.0       1.008       0.202      19.50        1.20        7.80      265.60        0.0
P 5038       460.40      4541.90       0.0       3.052       0.633      19.50        1.20        7.80      265.60        0.0
P 5038       460.40      4541.90       0.0       3.052       0.720      19.50        1.20        7.80      265.60        0.0
P 5038       460.40      4541.90       0.0       3.052       0.633      19.50        1.20        7.80      265.60        0.0
P 5039       455.20      4544.20       0.0      37.142       6.075      68.60        4.30        5.20      204.40        0.0
P 5039       455.20      4544.20       0.0     189.163      24.243      68.60        2.80       14.70      162.80        0.0
P 5039       455.20      4544.20       0.0     164.690      21.133      68.60        2.80       14.70      162.80        0.0
P 5039       455.10      4543.70       0.0       0.0         0.202      30.60        0.40       25.20       21.10        0.0
P 5039       455.10      4543.70       0.0       0.0         0.029       8.80        0.80        7.30       21.10        0.0
P 5039       455.10      4543.70       0.0       0.0         0.029       7.90        0.90        5.70       21.10        0.0
P 5039       455.30      4544.30       0.0       0.0         0.202      10.70        0.50       33.60       32.20        0.0
P 5039       455.30      4544.30       0.0       0.0         0.029      20.70        0.60       20.50       26.70        0.0
P 5041       459.70      4545.20       0.0     202.120      46.931      76.20        3.10        6.20      162.80        0.0
P 5041       459.70      4545.20       0.0     196.074      45.491      76.20        3.10        6.20      162.80        0.0
P 5041       459.70      4545.20       0.0      95.302      22.170      71.60        3.70        2.20      176.10        0.0
P 5041       459.70      4545.20       0.0      62.479       0.950      76.20        3.70        1.60      143.90        0.0
P 5041       459.70      4545.20       0.0       0.0         0.835      26.20        1.10       12.70       39.40        0.0
P 5041       459.70      4545.20       0.0       0.0         0.843      27.70        1.50        8.60       40.00        0.0
P 5041       459.70      4545.20       0.0       0.0         0.720      25.60        0.70       16.00       37.20        0.0
P 5041       459.70      4545.20       0.0       0.0         1.180      24.70        1.40        5.00       33.90        0.0
P 5041       459.70      4545.20       0.0       0.0         0.058      25.90        0.70        4.60       29.40        0.0
P 5041       459.70      4545.20       0.0       0.0         0.066      25.90        0.50       15.40       68.90        0.0
P 5041       459.70      4545.20       0.0       0.0         0.374      27.40        0.80       12.40       21.10        0.0
P 5041       459.70      4545.30       0.0       2.874       0.0        45.10        0.50        2.20      204.40        0.0
P 5042       459.40      4546.00       0.0     137.914      25.452      76.20        4.30        3.10      213.90        0.0
P 5042       459.40      4546.00       0.0       0.0         0.230      37.50        0.90       10.90       28.30        0.0
P 5146       460.20      4544.10       0.0       0.0         0.058      20.10        0.90       15.50       65.00        0.0
P 5048       452.50      4556.00       0.0       0.0         0.835      30.50        2.10        2.00      204.40        0.0
P 5048       452.50      4556.00       0.0       0.0         0.835      30.50        2.10        2.00      204.40        0.0
P 5048       452.50      4556.00       0.0       0.0         0.835      30.50        2.10        2.00      204.40        0.0
P 5048       452.50      4556.00       0.0       0.0         0.835      30.50        2.10        2.00      204.40        0.0
P 5162       461.10      4545.40       0.0       0.0         0.115       0.0         0.0         0.0       -17.80        0.0
P 5053       462.20      4538.40       0.0       2.793       0.403      24.40        1.20        7.20      282.20        0.0
P 5053       462.20      4538.40       0.0       2.793       0.403      30.60        1.20        7.20      282.20        0.0
P 5054       460.80      4545.40       0.0       3.513       0.230      22.90        0.90       13.40      246.10        0.0
P 5054       460.80      4545.40       0.0       3.513       0.230      22.90        0.90       13.40      246.10        0.0
P 5054       460.80      4545.40       0.0       3.513       0.230      22.90        0.90       13.40      246.10        0.0
P 5057       445.40      4540.50       0.0      38.005       3.167      54.90        3.00       11.60      287.80        0.0
P 5057       445.40      4540.50       0.0       0.0        17.534       0.0         0.0         0.0       132.20        0.0
P 5057       445.40      4540.50       0.0       0.0         0.662       0.0         0.0         0.0        21.10        0.0
P 5057       445.40      4540.50       0.0       0.0         0.346       0.0         0.0         0.0        10.00        0.0
P 5058       448.20      4541.60       0.0       3.455       1.553      51.80        1.40        4.20      315.60        0.0
P 5059       445.20      4540.30       0.0       0.0         0.115      14.60        1.20        1.20      140.90        0.0
P 5060       449.80      4540.80       0.0       0.0         0.086       7.60        0.90        0.0        10.00        0.0
P 5060       449.80      4540.80       0.0       0.0         0.029       5.50        0.0         0.0        10.00        0.0
P 5062       448.00      4540.90       0.0       3.110       0.173      16.50        1.30       18.30      232.20        0.0
P 5062       448.00      4540.90       0.0       3.110       0.173      16.50        1.30       18.30      232.20        0.0
P 5062       448.00      4540.90       0.0       0.0         0.029      15.70        0.50       22.60       26.70        0.0
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                                                          CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID           X(KM)        Y(KM)         TX(M)   SO2(G/SEC)   TSP(G/SEC)    HS(M)        D(M)   VS(M/SEC)     TS(DC)    SA(M**2/SEC)
P 5062         448.00      4540.90         0.0         0.0         0.086       15.50       0.50       22.60       26.70        0.0
P 5062         448.00      4540.90         0.0         0.0         0.432        9.10       0.70       13.40       21.10        0.0
P 5064         448.20      4540.40         0.0         3.685       2.332       45.70       1.80        6.70      260.00        0.0
P 5064         448.20      4540.40         0.0         3.685       2.332       45.70       1.80        0.0       260.00        0.0
P 5064         448.20      4540.40         0.0         0.0         0.058        0.0        0.0         0.0        10.00        0.0
P 5064         448.20      4540.40         0.0         0.0         0.029        0.0        0.0         0.0        10.00        0.0
P 5064         448.20      4540.40         0.0         0.0         0.029        0.0        0.70       15.80       12.80        0.0
P 5065         447.70      4539.60         0.0       696.766       2.188       91.40       3.00       15.60      162.80        0.0
P 5065         447.70      4539.60         0.0       504.148       1.584       91.40       3.00       10.50      162.80        0.0
P 5065         447.70      4539.60         0.0        64.782       9.991       99.70       4.60       14.40      243.30        0.0
P 5065         447.70      4539.60         0.0        64.782       9.991       99.70       4.60       14.40      243.30        0.0
P 5065         447.70      4539.60         0.0         0.0         0.029       38.40       0.50       15.50       21.10        0.0
P 5065         447.70      4539.60         0.0         0.0         1.468       24.40       1.80        2.70      426.70        0.0
P 5065         447.70      4539.60         0.0         0.0         0.518       36.60       0.60       24.30       51.70        0.0
P 5065         447.70      4539.60         0.0         0.0         0.518       36.60       0.60       24.30       48.90        0.0
P 5065         447.70      4539.60         0.0         0.0         0.518       36.60       0.60       24.30       51.70        0.0
P 5065         447.70      4539.60         0.0         0.0         0.518       36.60       0.60       24.30       51.70        0.0
P 5065         447.70      4534.60         0.0         0.0         0.518       36.60       0.60       24.30       51.70        0.0
P 5069         451.20      4542.10         0.0         0.0         1.152        0.0        0.0         0.0       -17.80        0.0
P 5092         449.10      4541.10         0.0         0.0         0.058       10.70       1.00       16.00       37.80        0.0
P 5103         446.60      4550.30         0.0         0.0         2.534       10.70       3.00        0.0       -17.80        0.0
P 5103         446.60      4550.30         0.0         0.0         2.994       10.70       3.00        0.0       -17.80        0.0
P 5104         447.30      4549.70         0.0        21.105       0.0         24.40       1.10        5.30       76.70        0.0
P 5119         463.00      4554.50         0.0         1.353       0.432       22.90       0.90       12.10      204.40        0.0
P 5134         465.30      4553.40         0.0         0.0         3.282        4.60       0.80        0.0       190.60        0.0
P 5137         461.10      4571.70         0.0         0.461       0.029        4.60       1.20       18.20      148.90        0.0
P 5138         460.90      4573.00         0.0         3.541       1.440       23.50       2.10        9.40      287.80        0.0
P 5138         460.90      4573.00         0.0         1.584       0.633       23.50       2.10        4.10      287.80        0.0
P 5138         460.90      4573.00         0.0         1.584       0.633       23.50       2.10        4.10      287.80        0.0
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                                        LDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID          X(KM)       Y(KM)       TX(M)   SO2(G/SEC)  TSP(G/SEC)     HS(M)       D(M)   VS(M/SEC)    TS(DC)   SA(M**2/SEC)
0 5580        480.00     4535.00    10000.00        1.410       1.180     10.00       0.0         0.0       0.0        0.0
0 5580        490.00     4535.00    10000.00        1.253       1.487     10.00       0.0         0.0       0.0        0.0
0 5580        470.00     4540.00     5000.00        0.645       0.565     10.00       0.0         0.0       0.0        0.0
0 5580        475.00     4540.00     5000.00        0.729       0.556     10.00       0.0         0.0       0.0        0.0
0 5580        470.00     4545.00     5000.00        1.281       0.746     10.00       0.0         0.0       0.0        0.0
0 5580        475.00     4545.00     5000.00        0.756       0.565     10.00       0.0         0.0       0.0        0.0
0 5580        480.00     4545.00    10000.00        1.655       1.165     10.00       0.0         0.0       0.0        0.0
0 5580        490.00     4545.00    10000.00        1.170       1.713     10.00       0.0         0.0       0.0        0.0
0 5580        467.50     4550.00     2500.00        0.020       0.009     10.00       0.0         0.0       0.0        0.0
0 5580        467.50     4552.50     2500.00        0.799       0.404     10.00       0.0         0.0       0.0        0.0
0 5580        470.00     4550.00     5000.00        1.693       0.865     10.00       0.0         0.0       0.0        0.0
0 5580        475.00     4550.00     5000.00        0.695       1.014     10.00       0.0         0.0       0.0        0.0
0 5580        467.50     4555.00     2500.00        1.806       0.854     10.00       0.0         0.0       0.0        0.0
0 5580        467.50     4557.50     2500.00        0.610       0.357     10.00       0.0         0.0       0.0        0.0
0 5580        470.00     4555.00     2500.00        2.936       1.753     10.00       0.0         0.0       0.0        0.0
0 5580        472.50     4555.00     2500.00        0.486       0.320     10.00       0.0         0.0       0.0        0.0
0 5580        470.00     4557.50     2500.00        0.346       0.387     10.00       0.0         0.0       0.0        0.0
0 5580        472.50     4557.50     2500.00        0.020       0.009     10.00       0.0         0.0       0.0        0.0
0 5580        475.00     4555.00     2500.00        1.433       0.700     10.00       0.0         0.0       0.0        0.0
0 5580        477.50     4555.00     2500.00        1.651       0.775     10.00       0.0         0.0       0.0        0.0
0 5580        475.00     4557.50     2500.00        0.0         0.0       10.00       0.0         0.0       0.0        0.0
0 5580        477.50     4557.50     2500.00        0.368       0.278     10.00       0.0         0.0       0.0        0.0
0 5580        480.00     4555.00    10000.00        3.217       1.680     10.00       0.0         0.0       0.0        0.0
0 5580        490.00     4555.00    10000.00        2.480       1.478     10.00       0.0         0.0       0.0        0.0
0 5580        470.00     4560.00     5000.00        0.574       0.653     10.00       0.0         0.0       0.0        0.0
0 5580        475.00     4560.00     5000.00        0.011       0.048     10.00       0.0         0.0       0.0        0.0
0 5580        470.00     4565.00     5000.00        1.745       0.868     10.00       0.0         0.0       0.0        0.0
0 5580        475.00     4565.00     5000.00        0.883       0.599     10.00       0.0         0.0       0.0        0.0
0 5580        480.00     4565.00    10000.00        1.913       1.252     10.00       0.0         0.0       0.0        0.0
0 5580        490.00     4565.00    10000.00        1.434       1.235     10.00       0.0         0.0       0.0        0.0
0 5580        470.00     4570.00     5000.00        1.021       0.642     10.00       0.0         0.0       0.0        0.0
0 5580        475.00     4570.00     5000.00        0.820       0.594     10.00       0.0         0.0       0.0        0.0
0 6400        445.00     4500.00     5000.00        0.817       0.854     10.00       0.0         0.0       0.0        0.0
0 6400        450.00     4500.00    10000.00        2.458       1.537     10.00       0.0         0.0       0.0        0.0
0 6400        460.00     4500.00    10000.00        1.841       1.471     10.00       0.0         0.0       0.0        0.0
0 6400        470.00     4500.00    10000.00        2.323       2.458     10.00       0.0         0.0       0.0        0.0
0 6400        445.00     4505.00     5000.00        1.070       0.830     10.00       0.0         0.0       0.0        0.0
0 6400        480.00     4505.00    10000.00        1.919       1.878     10.00       0.0         0.0       0.0        0.0
0 6400        445.00     4510.00     5000.00        0.910       0.772     10.00       0.0         0.0       0.0        0.0
0 6400        450.00     4510.00     5000.00        0.942       0.895     10.00       0.0         0.0       0.0        0.0
0 6400        455.00     4510.00     5000.00        3.719       1.219     10.00       0.0         0.0       0.0        0.0
0 6400        460.00     4510.00     5000.00        5.963       1.239     10.00       0.0         0.0       0.0        0.0
0 6400        465.00     4510.00     5000.00        6.977       3.108     10.00       0.0         0.0       0.0        0.0
0 6400        470.00     4510.00     5000.00        0.935       0.951     10.00       0.0         0.0       0.0        0.0
0 6400        475.00     4510.00     5000.00        0.925       1.434     10.00       0.0         0.0       0.0        0.0
0 6400        490.00     4510.00     5000.00        0.0         0.0       10.00       0.0         0.0       0.0        0.0
0 6400        445.00     4515.00     5000.00        0.038       0.017     10.00       0.0         0.0       0.0        0.0
0 6400        450.00     4515.00     5000.00        5.109       1.979     10.00       0.0         0.0       0.0        0.0
0 6400        455.00     4515.00     2500.00        4.571       1.203     10.00       0.0         0.0       0.0        0.0
0 6400        457.50     4515.00     2500.00        1.809       0.564     10.00       0.0         0.0       0.0        0.0
0 6400        455.00     4517.50     2500.00        2.774       0.817     10.00       0.0         0.0       0.0        0.0
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                                                     CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID          X(KM)       Y(KM)       TX(M)    SO2(G/SEC)  TSP(G/SEC)    HS(M)        D(M)    VS(M/SEC)    TS(DC)    SA(M**2/SEC)
0 6400        457.50     4517.50     2500.00       0.616       0.319      10.00        0.0          0.0        0.0         0.0
0 6400        460.00     4515.00     2500.00       1.093       0.524      10.00        0.0          0.0        0.0         0.0
0 6400        462.50     4515.00     2500.00       4.145       1.169      10.00        0.0          0.0        0.0         0.0
0 6400        460.00     4517.50     2500.00       0.600       1.117      10.00        0.0          0.0        0.0         0.0
0 6400        462.50     4517.50     2500.00       1.882       0.571      10.00        0.0          0.0        0.0         0.0
0 6400        465.00     4515.00     2500.00       7.403       2.005      10.00        0.0          0.0        0.0         0.0
0 6400        467.50     4515.00     2500.00       7.578       2.080      10.00        0.0          0.0        0.0         0.0
0 6400        465.00     4517.50     2500.00       3.957       1.096      10.00        0.0          0.0        0.0         0.0
0 6400        467.50     4517.50     2500.00       6.093       1.666      10.00        0.0          0.0        0.0         0.0
0 6400        470.00     4515.00     2500.00       2.894       2.529      10.00        0.0          0.0        0.0         0.0
0 6400        472.50     4515.00     2500.00       0.511       0.333      10.00        0.0          0.0        0.0         0.0
0 6400        470.00     4517.50     2500.00       2.957       1.335      10.00        0.0          0.0        0.0         0.0
0 6400        472.50     4517.50     2500.00       1.613       0.525      10.00        0.0          0.0        0.0         0.0
0 6400        475.00     4515.00     5000.00       1.410       0.665      10.00        0.0          0.0        0.0         0.0
0 6400        480.00     4515.00    10000.00       2.262       1.457      10.00        0.0          0.0        0.0         0.0
0 6400        490.00     4515.00     5000.00       0.0         0.0        10.00        0.0          0.0        0.0         0.0
0 6400        445.00     4520.00     5000.00       0.077       0.034      10.00        0.0          0.0        0.0         0.0
0 6400        450.00     4520.00     5000.00       1.125       0.706      10.00        0.0          0.0        0.0         0.0
0 6400        455.00     4520.00     5000.00       1.051       0.673      10.00        0.0          0.0        0.0         0.0
0 6400        460.00     4520.00     5000.00       1.687       0.690      10.00        0.0          0.0        0.0         0.0
0 6400        465.00     4520.00     2500.00       2.242       0.666      10.00        0.0          0.0        0.0         0.0
0 6400        467.50     4520.00     2500.00       3.699       1.058      10.00        0.0          0.0        0.0         0.0
0 6400        465.00     4522.50     2500.00       2.111       0.644      10.00        0.0          0.0        0.0         0.0
0 6400        467.50     4522.50     2500.00       0.601       0.322      10.00        0.0          0.0        0.0         0.0
0 6400        470.00     4520.00     5000.00       3.088       1.220      10.00        0.0          0.0        0.0         0.0
0 6400        475.00     4520.00     5000.00       4.615       2.246      10.00        0.0          0.0        0.0         0.0
0 6400        490.00     4520.00     5000.00       1.126       0.656      10.00        0.0          0.0        0.0         0.0
0 6400        445.00     4525.00     5000.00       1.027       0.787      10.00        0.0          0.0        0.0         0.0
0 6400        450.00     4525.00     5000.00       0.841       1.186      10.00        0.0          0.0        0.0         0.0
0 6400        455.00     4525.00     5000.00       0.796       0.858      10.00        0.0          0.0        0.0         0.0
0 6400        460.00     4525.00     5000.00       1.501       1.102      10.00        0.0          0.0        0.0         0.0
0 6400        465.00     4525.00     5000.00       3.378       1.052      10.00        0.0          0.0        0.0         0.0
0 6400        470.00     4525.00     5000.00       1.191       0.663      10.00        0.0          0.0        0.0         0.0
0 6400        475.00     4525.00     5000.00       0.0         0.0        10.00        0.0          0.0        0.0         0.0
0 6400        480.00     4525.00    10000.00       2.706       1.564      10.00        0.0          0.0        0.0         0.0
0 6400        490.00     4525.00     5000.00       7.596       2.139      10.00        0.0          0.0        0.0         0.0
0 6400        465.00     4530.00     5000.00       0.692       0.715      10.00        0.0          0.0        0.0         0.0
0 6400        470.00     4530.00    10000.00       2.287       1.547      10.00        0.0          0.0        0.0         0.0
0 6400        490.00     4530.00     2500.00       2.404       0.699      10.00        0.0          0.0        0.0         0.0
0 6400        490.00     4532.50     2500.00       0.007       0.035      10.00        0.0          0.0        0.0         0.0
0 6400        465.00     4535.00     5000.00       1.290       0.652      10.00        0.0          0.0        0.0         0.0
0 6500        445.00     4530.00     5000.00       0.852       0.951      10.00        0.0          0.0        0.0         0.0
0 6500        450.00     4530.00     5000.00       1.053       0.985      10.00        0.0          0.0        0.0         0.0
0 6500        455.00     4530.00     5000.00       0.649       0.974      10.00        0.0          0.0        0.0         0.0
0 6500        460.00     4530.00     5000.00       1.624       4.004      10.00        0.0          0.0        0.0         0.0
0 6500        445.00     4535.00     5000.00       1.553       1.213      10.00        0.0          0.0        0.0         0.0
0 6500        450.00     4535.00     5000.00       1.116       1.399      10.00        0.0          0.0        0.0         0.0
0 6500        455.00     4535.00     5000.00       1.343       1.109      10.00        0.0          0.0        0.0         0.0
0 6500        460.00     4535.00     5000.00       1.280       1.162      10.00        0.0          0.0        0.0         0.0
0 6500        440.00     4540.00     5000.00       0.713       1.976      10.00        0.0          0.0        0.0         0.0
0 6500        445.00     4540.00     2500.00       0.661       0.499      10.00        0.0          0.0        0.0         0.0
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                                                CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID            X(KM)        Y(KM)        TX(M)    SO2(G/SEC)   TSP(G/SEC)      HS(M)         D(M)     VS(M/SEC)      TS(CC)    SA(M**2/SEC)
0 6500          447.50      4540.00      2500.00         1.517        1.940      10.00          0.0           0.0         0.0         0.0
0 6500          445.00      4542.50      2500.00         0.392        0.389      10.00          0.0           0.0         0.0         0.0
0 6500          447.50      4542.50      2500.00         0.363        0.720      10.00          0.0           0.0         0.0         0.0
0 6500          450.00      4540.00      2500.00         1.425        1.058      10.00          0.0           0.0         0.0         0.0
0 6500          452.50      4540.00      2500.00         0.581        0.454      10.00          0.0           0.0         0.0         0.0
0 6500          450.00      4542.50      2500.00         0.813        0.568      10.00          0.0           0.0         0.0         0.0
0 6500          452.50      4542.50      2500.00         2.046        1.324      10.00          0.0           0.0         0.0         0.0
0 6500          455.00      4540.00      2500.00         0.722        0.525      10.00          0.0           0.0         0.0         0.0
0 6500          457.50      4540.00      2500.00         0.550        0.447      10.00          0.0           0.0         0.0         0.0
0 6500          455.00      4542.50      2500.00         2.133        1.583      10.00          0.0           0.0         0.0         0.0
0 6500          457.50      4542.50      2500.00         2.187        1.336      10.00          0.0           0.0         0.0         0.0
0 6500          460.00      4540.00      2500.00         0.340        0.388      10.00          0.0           0.0         0.0         0.0
0 6500          462.50      4540.00      2500.00         0.503        0.423      10.00          0.0           0.0         0.0         0.0
0 6500          460.00      4542.50      2500.00         1.228        1.369      10.00          0.0           0.0         0.0         0.0
0 6500          462.50      4542.50      2500.00         1.204        0.791      10.00          0.0           0.0         0.0         0.0
0 6500          465.00      4540.00      5000.00         1.149        1.014      10.00          0.0           0.0         0.0         0.0
0 6500          440.00      4545.00      5000.00         0.678        1.026      10.00          0.0           0.0         0.0         0.0
0 6500          445.00      4545.00      5000.00         0.721        0.938      10.00          0.0           0.0         0.0         0.0
0 6500          450.00      4545.00      2500.00         0.507        0.425      10.00          0.0           0.0         0.0         0.0
0 6500          452.50      4545.00      2500.00         2.313        1.452      10.00          0.0           0.0         0.0         0.0
0 6500          450.00      4547.50      2500.00         0.866        0.616      10.00          0.0           0.0         0.0         0.0
0 6500          452.50      4547.50      2500.00         3.048        1.818      10.00          0.0           0.0         0.0         0.0
0 6500          455.00      4545.00      2500.00         1.853        1.204      10.00          0.0           0.0         0.0         0.0
0 6500          457.50      4545.00      2500.00         2.516        1.519      10.00          0.0           0.0         0.0         0.0
0 6500          455.00      4547.50      2500.00         2.020        1.322      10.00          0.0           0.0         0.0         0.0
0 6500          457.50      4547.50      2500.00         1.010        0.675      10.00          0.0           0.0         0.0         0.0
0 6500          460.00      4545.00      2500.00         1.771        1.094      10.00          0.0           0.0         0.0         0.0
0 6500          462.50      4545.00      2500.00         0.958        0.651      10.00          0.0           0.0         0.0         0.0
0 6500          460.00      4547.50      2500.00         0.822        0.745      10.00          0.0           0.0         0.0         0.0
0 6500          462.50      4547.50      2500.00         0.433        0.403      10.00          0.0           0.0         0.0         0.0
0 6500          465.00      4545.00      5000.00         0.707        0.948      10.00          0.0           0.0         0.0         0.0
0 6500          440.00      4550.00      5000.00         0.648        1.111      10.00          0.0           0.0         0.0         0.0
0 6500          445.00      4550.00      5000.00         1.076        0.981      10.00          0.0           0.0         0.0         0.0
0 6500          450.00      4550.00      2500.00         1.303        0.821      10.00          0.0           0.0         0.0         0.0
0 6500          452.50      4550.00      2500.00         1.449        0.923      10.00          0.0           0.0         0.0         0.0
0 6500          450.00      4552.50      2500.00         0.033        0.068      10.00          0.0           0.0         0.0         0.0
0 6500          452.50      4552.50      2500.00         0.312        0.433      10.00          0.0           0.0         0.0         0.0
0 6500          455.00      4550.00      2500.00         1.150        0.751      10.00          0.0           0.0         0.0         0.0
0 6500          457.50      4550.00      2500.00         1.640        1.020      10.00          0.0           0.0         0.0         0.0
0 6500          455.00      4552.50      2500.00         0.681        0.491      10.00          0.0           0.0         0.0         0.0
0 6500          457.50      4552.50      2500.00         2.147        1.336      10.00          0.0           0.0         0.0         0.0
0 6500          460.00      4550.00      2500.00         0.413        0.394      10.00          0.0           0.0         0.0         0.0
0 6500          462.50      4550.00      2500.00         0.517        0.517      10.00          0.0           0.0         0.0         0.0
0 6500          460.00      4552.50      2500.00         1.275        0.640      10.00          0.0           0.0         0.0         0.0
0 6500          462.50      4552.50      2500.00         0.500        0.433      10.00          0.0           0.0         0.0         0.0
0 6500          465.00      4550.00      2500.00         0.301        0.538      10.00          0.0           0.0         0.0         0.0
0 6500          465.00      4552.50      2500.00         0.098        0.096      10.00          0.0           0.0         0.0         0.0
0 6500          440.00      4555.00      5000.00         0.101        0.255      10.00          0.0           0.0         0.0         0.0
0 6500          445.00      4555.00      5000.00         0.453        0.936      10.00          0.0           0.0         0.0         0.0
0 6500          450.00      4555.00      5000.00         0.770        0.923      10.00          0.0           0.0         0.0         0.0
0 6500          455.00      4555.00      5000.00         1.523        1.233      10.00          0.0           0.0         0.0         0.0
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                                                  CDM1 VERSION 76150,  RUN     1
SOURCE INPUT
  ID          X(KM)        Y(KM)       TX(M)   SO2(G/SEC)  TSP(G/SEC)    HS(M)       D(M)    VS(M/SEC)    TS(DC)   SA(M**2/SEC)
0 6500       460.00      4555.00     2500.00       0.635      0.484      10.00       0.0         0.0        0.0        0.0
0 6500       462.50      4555.00     2500.00       1.086      1.083      10.00       0.0         0.0        0.0        0.0
0 6500       460.00      4557.50     2500.00       0.362      0.394      10.00       0.0         0.0        0.0        0.0
0 6500       462.50      4557.50     2500.00       0.500      0.432      10.00       0.0         0.0        0.0        0.0
0 6500       465.00      4555.00     2500.00       0.447      0.953      10.00       0.0         0.0        0.0        0.0
0 6500       465.00      4557.50     2500.00       0.245      0.408      10.00       0.0         0.0        0.0        0.0
0 6500       440.00      4560.00    10000.00       1.463      2.603      10.00       0.0         0.0        0.0        0.0
0 6500       450.00      4560.00    10000.00       1.692      3.204      10.00       0.0         0.0        0.0        0.0
0 6500       460.00      4560.00     5000.00       0.780      0.981      10.00       0.0         0.0        0.0        0.0
0 6500       465.00      4560.00     5000.00       1.545      3.263      10.00       0.0         0.0        0.0        0.0
0 6500       460.00      4565.00     5000.00       0.885      0.935      10.00       0.0         0.0        0.0        0.0
0 6500       465.00      4565.00     5000.00       0.142      0.273      10.00       0.0         0.0        0.0        0.0
0 6500       450.00      4570.00     5000.00       0.768      1.369      10.00       0.0         0.0        0.0        0.0
0 6500       455.00      4570.00     5000.00       1.142      1.100      10.00       0.0         0.0        0.0        0.0
0 6500       460.00      4570.00     5000.00       0.763      0.923      10.00       0.0         0.0        0.0        0.0
0 6500       465.00      4570.00     5000.00       0.763      0.923      10.00       0.0         0.0        0.0        0.0
1 6500       450.00      4575.00     5000.00       1.228      1.092      10.00       0.0         0.0        0.0        0.0
1 6500       455.00      4575.00     5000.00       0.917      1.822      10.00       0.0         0.0        0.0        0.0
1 6500       460.00      4575.00     5000.00       0.697      0.958      10.00       0.0         0.0        0.0        0.0
1 6500       465.00      4575.00     5000.00       0.697      0.924      10.00       0.0         0.0        0.0        0.0

      175 AREA SOURCE(S).       284 POINT SOURCE(S).
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APPENDIX E

EMISSION SOURCES FOR THE CLEVELAND AQMA

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                                          CDM1 VERSION 78130,  RUN     1
SOURCE INPUT
   ID          X(KM)       Y(KM)        TX(M)  SO2(G/SEC)  TSP(G/SEC)    HS(M)      D(M)   VS(M/SEC)    TS(DC)   BA(M**2/SEC)
P 5144        446.30     4590.30         0.0       0.0        0.058       7.90      0.70       5.80      54.40         0.0
P 5001        443.90     4586.80         0.0       0.0        0.576       9.10      0.90    4312.00    1204.40         0.0
P 5001        443.90     4586.80         0.0       0.0        0.576       7.90      0.90    4312.00    1204.40         0.0
P 5147        438.10     4590.20         0.0       0.0        0.086       8.50      0.90      10.30      93.30         0.0
P 5147        438.10     4590.20         0.0       0.0        0.259      12.80      0.0        0.0       21.10         0.0
P 5147        438.10     4590.20         0.0       0.0        0.086       7.90      1.00       4.80      21.10         0.0
P 5002        442.30     4588.70         0.0       0.0        0.979       0.0       0.0        0.0      -17.80         0.0
P 5003        443.60     4591.50         0.0       4.031      0.662      45.70      2.10       1.90     204.40         0.0
P 5003        443.60     4591.50         0.0       4.031      0.662      45.70      2.10       1.90     204.40         0.0
P 5003        443.60     4591.50         0.0       4.031      0.662      45.70      2.10       1.90     204.40         0.0
P 5003        443.60     4591.50         0.0       4.031      0.662      45.70      2.10       1.90     204.40         0.0
P 5003        443.60     4591.50         0.0       4.031      0.662      45.70      2.10       1.90     204.40         0.0
P 5003        443.60     4591.50         0.0       4.031      0.662      45.70      2.10       1.90     204.40         0.0
P 5003        443.60     4591.50         0.0       8.066      1.526      45.70      2.10       4.80     204.40         0.0
P 5003        443.60     4591.50         0.0       8.695      1.411      45.70      2.10       4.10     204.40         0.0
P 5003        443.60     4591.50         0.0      10.595      1.728      25.90      2.10       5.00     204.40         0.0
P 5003        443.60     4591.50         0.0       9.962      1.641      25.90      2.10       5.00     204.40         0.0
P 5003        443.60     4591.50         0.0      18.628      3.052      38.10      3.00       4.30     260.00         0.0
P 5003        443.00     4590.80         0.0       0.0       34.666      19.80      0.80      51.70      54.40         0.0
P 5003        442.80     4590.20         0.0       0.0       30.059      50.00      3.70       1.90     260.00         0.0
P 5003        443.00     4590.80         0.0       0.0        0.576      42.70      4.00      12.50      76.70         0.0
P 5003        442.40     4590.00         0.0       3.858      2.303      61.00      3.00      10.30     315.60         0.0
P 5003        442.40     4590.00         0.0       3.426      1.728      76.20      3.40       6.80     315.60         0.0
P 5003        442.90     4590.80         0.0       0.0      142.376      45.70      3.00      18.10     126.70         0.0
P 5003        442.80     4590.20         0.0       0.0       10.460       0.0       0.0        0.0      -17.80         0.0
P 5003        443.40     4591.30         0.0       0.0       12.582       0.0       0.0        0.0      -17.80         0.0
P 5150        442.00     4591.10         0.0       0.0        0.230       9.40      4.40       0.70     704.40         0.0
P 5152        448.50     4595.30         0.0       1.756      0.0        48.80      2.30      27.60     315.60         0.0
P 5152        448.50     4595.30         0.0       1.756      0.0        48.80      2.30      27.60     315.60         0.0
P 5152        448.50     4595.30         0.0       1.756      0.0        48.80      2.30      27.60     315.60         0.0
P 5153        443.70     4587.50         0.0       0.0        0.144      15.20      1.30       7.20      65.60         0.0
P 5153        443.70     4587.50         0.0       0.0        0.144      15.20      1.30       7.20      65.60         0.0
P 5006        445.20     4597.60         0.0     114.247     26.187      49.70      2.60      17.50     160.00         0.0
P 5006        445.20     4597.60         0.0      60.175      4.589      52.70      2.60      10.90     176.70         0.0
P 5006        445.20     4597.60         0.0      60.175      4.520      52.70      2.60      10.90     176.70         0.0
P 5006        445.20     4597.60         0.0      60.924      5.758      52.70      2.60      10.90     176.70         0.0
P 5006        445.20     4597.60         0.0      60.175     33.917      52.70      2.60      10.90     176.70         0.0
P 5006        445.20     4597.60         0.0      60.924     46.067      52.70      2.60      10.90     176.70         0.0
P 5009        444.50     4591.40         0.0       2.908      1.008      15.20      1.20      10.50     171.10         0.0
P 5009        444.50     4591.40         0.0      54.563      0.0        61.00      1.40      11.50      80.00         0.0
P 5009        444.50     4591.40         0.0       0.0        2.505       9.10      0.30      19.20      21.10         0.0
P 5009        444.50     4591.40         0.0       0.0        0.662      24.40      1.20       6.70     343.30         0.0
P 5009        444.50     4591.40         0.0       0.0        0.173      13.70      0.90       1.00     148.90         0.0
P 5014        443.30     4592.20         0.0       2.562      1.008      30.50      0.90      26.40      65.60         0.0
P 5014        443.30     4592.20         0.0       2.562      0.230      30.50      0.90      26.40      65.60         0.0
P 5156        441.40     4593.50         0.0       0.0        1.152      33.50      1.70       1.60      10.00         0.0
P 5016        442.40     4593.70         0.0      12.006      1.756      95.70      3.70       9.30     304.40         0.0
P 5016        442.40     4593.70         0.0      12.006      1.756      95.70      3.70       9.30     304.40         0.0
P 5016        442.40     4593.70         0.0      12.006      1.756      95.70      3.70       9.30     304.40         0.0
P 5016        442.40     4593.70         0.0      12.006      1.756      95.70      3.70       9.30     304.40         0.0
P 5016        442.40     4593.70         0.0      12.006      1.756      95.70      3.70       9.30     304.40         0.0
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                                                  CDM1 VERSION 74130,  RUN     1
SOURCE INPUT
   ID        X(KM)       Y(KM)       TX(M)   SO2(G/SEC)  TSP(G/SEC)    HS(M)      D(M)    VS(M/SEC)    TS(DC)    DA(M**2/SEC)
P 5017      444.30     4598.30       0.0       152.137      44.585     81.70      3.70       10.30     129.40       0.0
P 5017      444.30     4598.30       0.0       152.137      90.404     81.70      3.70       10.30     129.40       0.0
P 5017      444.30     4598.30       0.0       239.348      35.414     81.70      3.70       12.00     123.90       0.0
P 5017      444.30     4598.30       0.0       239.348      35.414     81.70      3.70       12.00     123.90       0.0
P 5017      444.30     4598.30       0.0         3.945       0.115     38.10      3.70       10.30     129.40       0.0
P 5017      444.30     4598.30       0.0       824.171      79.725     97.50      5.20       16.10     152.80       0.0
P 5018      444.30     4596.20       0.0         2.476       0.144     88.60      4.30        7.70     273.90       0.0
P 5018      444.30     4596.20       0.0         2.476       0.144     88.60      4.30        7.70     273.90       0.0
P 5018      444.30     4596.20       0.0         2.476       0.144     88.60      4.30        7.70     273.90       0.0
P 5018      444.30     4596.20       0.0         2.476       0.144     88.60      4.30        7.70     273.90       0.0
P 5018      444.30     4596.30       0.0         4.405       0.259     88.60      4.30        7.70     273.90       0.0
P 5018      444.30     4596.20       0.0         4.405       0.259     88.60      4.30        7.70     273.90       0.0
P 5020      437.50     4589.80       0.0         1.152       0.086     22.90      4.80        1.30     200.00       0.0
P 5020      437.50     4589.80       0.0         1.152       0.086     22.90      4.80        1.30     200.00       0.0
P 5020      437.50     4589.80       0.0         0.0         1.123      9.80      0.90       19.80      21.10       0.0
P 5020      437.50     4589.80       0.0         0.0         0.547      9.10      0.90        6.90      21.10       0.0
P 5020      437.50     4589.80       0.0         0.0         0.432      9.10      0.90        5.10      21.10       0.0
P 5020      437.50     4589.80       0.0         0.0         0.173      6.10      0.90       12.30      21.10       0.0
P 5020      437.50     4589.80       0.0         0.0         0.173      4.90      0.50        3.00      21.10       0.0
P 5020      437.50     4589.80       0.0         0.0         0.029      5.50      0.40       23.10      21.10       0.0
P 5020      437.50     4589.80       0.0         0.0         0.029      6.70      0.80        5.20      21.10       0.0
P 5020      437.50     4589.80       0.0         0.0         0.173      6.70      0.80        3.10      21.10       0.0
P 5020      437.50     4589.80       0.0         0.0         0.086      4.90      0.50       16.00      21.10       0.0
P 5020      437.50     4589.80       0.0         0.0         0.029      6.70      0.80        7.20      21.10       0.0
P 5020      437.50     4589.80       0.0         0.0         0.144      6.10      0.80       16.00      21.10       0.0
P 5020      437.50     4589.80       0.0         0.0         1.209     10.70      0.60       32.30      21.10       0.0
P 5020      437.50     4589.80       0.0         0.0         0.489     15.20      0.80        8.30      21.10       0.0
P 5020      437.50     4589.80       0.0         0.0         0.432     15.20      0.80        7.20      21.10       0.0
P 5101      441.30     4591.80       0.0         1.152       0.086     22.90      4.80        1.30     200.00       0.0
P 5101      441.30     4591.80       0.0         1.152       0.086     22.90      4.80        1.30     200.00       0.0
P 5101      441.30     4591.80       0.0         0.0         0.029      7.90      0.60        7.80      21.10       0.0
P 5101      441.30     4591.80       0.0         0.0         0.029      7.90      0.60        4.90      21.10       0.0
P 5101      441.30     4591.80       0.0         0.0         0.288      8.50      0.50        4.80      21.10       0.0
P 5101      441.30     4591.80       0.0         0.0         0.374     10.40      1.20        4.00      21.10       0.0
P 5101      441.30     4591.80       0.0         0.0         0.029      8.50      0.50       15.00      21.10       0.0
P 5101      441.30     4591.80       0.0         0.0         0.029      9.10      0.80        7.80      21.10       0.0
P 5101      441.30     4591.80       0.0         0.0         0.029      7.90      0.60        7.80      21.10       0.0
P 5021      442.80     4593.20       0.0         0.0         0.403      8.50      0.70       13.50      93.30       0.0
P 5022      440.00     4593.80       0.0         0.0         2.505      7.60      0.50       23.00      10.00       0.0
P 5022      440.00     4593.80       0.0         0.0         0.749      7.60      0.50       23.00      10.00       0.0
P 5022      440.00     4593.80       0.0         0.0         4.520     34.70      2.40        2.40      43.30       0.0
P 5100      438.50     4592.40       0.0         0.0         0.029      7.60      0.70       19.80      29.40       0.0
P 5100      443.60     4588.70       0.0         0.0         1.037     12.20      0.0         0.0       32.20       0.0
P 5100      443.60     4588.70       0.0         0.0         0.518     12.20      0.0         0.0       65.60       0.0
P 5040      442.70     4588.50       0.0         3.167       0.633     19.80      1.00        5.40     204.40       0.0
P 5040      442.70     4588.50       0.0         1.526       0.288     14.00      0.80       12.80     204.40       0.0
P 5040      442.70     4588.50       0.0         1.526       0.288     14.00      0.80       12.80     204.40       0.0
P 5040      442.70     4588.50       0.0         0.0         0.346     15.80      0.60        9.70      21.10       0.0
P 5040      442.90     4588.60       0.0         0.0         0.605     13.70      0.60       10.80     148.90       0.0
P 5040      442.90     4588.60       0.0         0.0         0.029     11.30      0.40       11.20      21.10       0.0
P 5040      442.80     4588.60       0.0         2.020       0.029     34.80      6.20       66.00      25.00       0.0
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                                                  CDM1 VERSION 76130,  RUN     1
SOURCE INPUT
    ID         X(KM)       Y(KM)       IX(M)    SO2(G/SEC)   TSP(G/SEC)    HS(M)       D(M)    VS(M/SEC)     TS(DC)    BA(M**2/SEC)
  P 5140      458.00     4588.90        0.0        2.022        4.232      30.90       2.40        1.90      315.00        0.0
  P 5140      458.00     4588.90        0.0        2.303        3.455      30.90       2.40        1.90      315.00        0.0
  P 5140      458.00     4588.90        0.0        2.022        4.232      30.90       2.40        1.90      315.00        0.0
  P 5001      496.00     4613.00        0.0        0.0          0.259       4.60       0.90        7.20      132.20        0.0
  P 5002      482.50     4603.70        0.0        6.910        1.296      50.30       1.40       19.20      200.00        0.0
  P 5002      482.50     4603.70        0.0        2.850        0.510      50.30       1.40       19.20      200.00        0.0
  P 5001      477.20     4618.30        0.0        0.0          0.374      13.10       0.10        0.0       648.90        0.0
  P 5001      477.20     4618.30        0.0        0.0          0.376      13.10       0.10        0.0       648.90        0.0
  P 5001      477.20     4618.30        0.0        1.958        0.0         8.50       0.80       15.00      815.00        0.0
  P 5019      480.40     4623.60        0.0       30.779       37.084      52.70       2.40       12.60      204.40        0.0
  P 5019      480.40     4623.60        0.0       30.779       37.084      52.70       2.40       12.60      204.40        0.0
  P 5002      482.90     4624.50        0.0        8.436        2.669      54.30       3.40       10.10      207.00        0.0
  P 5002      482.90     4624.50        0.0       27.899        5.067      54.30       3.40       10.10      207.00        0.0
  P 5003      476.80     4622.30        0.0        0.0          0.144      12.80       0.50       30.00       15.60        0.0
  P 5003      476.80     4622.30        0.0        0.0          0.173      11.00       0.50       21.00       48.90        0.0
  P 5004      463.00     4612.30        0.0        0.0          0.115      20.10       1.00       15.20      121.10        0.0
  P 5004      463.00     4612.00        0.0        0.0          0.115      20.10       1.20       15.50       93.30        0.0
  P 5005      478.30     4622.80        0.0      204.530        7.687      53.60       4.30        9.70      105.00        0.0
  P 5005      478.30     4622.80        0.0      224.261        8.378      53.60       4.30        9.70      105.00        0.0
  P 5005      478.30     4622.80        0.0      233.613       13.100      49.10       2.40       10.70      176.70        0.0
  P 5005      478.30     4622.80        0.0      242.947       18.168      53.90       4.60        5.90      176.70        0.0
  P 5005      478.30     4622.80        0.0       67.834       22.487      68.60       3.80        3.50      315.00        0.0
  P 5005      478.30     4622.80        0.0       67.834       22.487      68.60       3.80        3.50      315.00        0.0
  P 5005      478.30     4622.80        0.0       67.834       22.487      68.60       3.80        3.50      315.00        0.0
  P 5005      478.30     4622.80        0.0        2.131        0.144      15.50       1.50       22.50      315.00        0.0
  P 5005      478.30     4622.80        0.0        2.131        0.144      18.30       2.00        0.0       315.00        0.0
  P 5005      478.30     4622.80        0.0        5.960        0.576      15.80       1.20       29.30      343.30        0.0
  P 5005      478.30     4622.80        0.0        5.960        0.576      15.80       1.20       29.30      343.30        0.0
  P 5005      478.30     4622.80        0.0        0.0          0.843      47.20       1.30       12.80       31.10        0.0
  P 5005      478.30     4622.80        0.0        0.0          4.695      22.90       0.60       29.30       48.10        0.0
  P 5005      478.30     4622.80        0.0        0.0          1.006      18.20       0.60       15.50       31.10        0.0
  P 5005      478.30     4622.80        0.0        0.0          1.468      13.40       0.90       17.00       76.70        0.0
  P 5005      478.30     4622.80        0.0        0.0          4.774      15.20       0.90       21.90       76.10        0.0
  P 5005      478.30     4622.80        0.0        0.0          5.566      18.30       0.40       11.10       30.60        0.0
  P 5005      478.30     4622.80        0.0        0.0          8.033      24.70       1.80        7.40       64.40        0.0
  P 5005      478.80     4622.80        0.0        0.0          0.202      18.30       5.10        1.10       93.30        0.0
  P 5005      478.90     4622.90        0.0        2.850        5.402      81.00       2.40        1.30      121.10        0.0
  P 5006      476.40     4621.90        0.0       17.592        2.246      50.30       3.20       17.60      200.00        0.0
  P 5006      476.40     4621.90        0.0       17.592        2.246      50.30       3.20       17.60      200.00        0.0
  P 5006      476.40     4621.90        0.0        0.0          0.202       8.10       0.40       13.90       10.00        0.0
  P 5006      476.40     4621.90        0.0        0.0          0.056      10.30       0.20        8.10       10.00        0.0
  P 5006      476.40     4621.90        0.0        0.0          0.202      20.80       0.60       12.50       10.00        0.0
  P 5017      467.40     4621.80        0.0        0.0          0.058       6.80       1.50       13.50      121.10        0.0
  P 5007      479.00     4619.20        0.0        8.593        1.094      76.20       3.00       15.10      187.00        0.0
  P 5007      479.00     4619.20        0.0       13.561        0.484      76.20       3.00       15.10      187.00        0.0
  P 5007      479.00     4619.20        0.0      123.842        4.117      76.20       3.00       15.10      187.00        0.0
  P 5009      480.00     4621.50        0.0        0.056        4.452      12.20       2.70        3.00       82.20        0.0
  P 5012      463.00     4613.20        0.0      517.392       22.371      91.40       4.90        9.60      127.00        0.0
  P 5012      463.00     4613.20        0.0      517.392       22.371      91.40       4.90        9.60      127.00        0.0
  P 5012      463.00     4613.20        0.0      517.392       22.371      91.40       4.90        9.60      127.00        0.0
  P 5012      463.00     4613.20        0.0      874.700       53.294      91.40       5.50       11.00      112.80        0.0
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                                        CDMI VERSION 76130,  RUN     1
SOURCE INPUT
  ID         X(KM)      Y(KM)       IX(M)   SO2(G/SEC)  TSP(G/SEC)   HS(M)      D(M)    VS(M/SEC)    TS(DC)   SA(M**2/SEC)
P 5222      446.80     4571.00      0.0        5.384       1.382     33.80      2.30        0.20      176.70       0.0
P 5222      446.80     4571.00      0.0        5.384       1.382     33.80      2.30        0.20      176.70       0.0
P 5222      446.80     4571.00      0.0        2.303       0.576     33.80      2.30        0.20      176.70       0.0
P 5098      430.70     4583.80      0.0       33.341      37.746     41.80      4.60        6.10      293.30       0.0
P 5098      430.70     4583.80      0.0       55.569      62.939     41.80      4.60        6.10      293.30       0.0
P 5098      430.70     4583.80      0.0       55.569      62.939     41.80      4.60        6.10      293.30       0.0
P 5098      430.70     4583.80      0.0       55.569      62.939     41.80      4.60        6.10      293.30       0.0
P 5098      430.70     4583.80      0.0       55.569       9.444     41.80      4.60        6.10      293.30       0.0
P 5098      430.80     4584.20      0.0        0.0         0.893     10.10      1.10       14.20       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.893     10.10      1.00       14.80       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.893     10.10      1.10       14.20       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.893     10.10      1.10       14.20       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.893     10.10      0.90       15.40       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.893     10.10      1.00       14.80       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.374     10.10      0.80       13.30       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.432     10.10      0.80       13.30       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.432     10.10      0.90       13.50       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.432     10.10      0.70       13.40       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.432     10.10      0.90       13.50       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.432     10.10      0.90       13.50       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.432     10.10      0.80       13.30       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.432     10.10      0.80       13.30       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.144     10.10      0.90       13.50       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.144     10.10      0.90       13.50       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.115     10.10      1.10       14.20       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.086     10.10      0.70       14.70       21.10       0.0
P 5098      430.80     4584.20      0.0        0.0         0.086     10.10      0.50       16.00       21.10       0.0
P 5099      431.30     4585.20      0.0        0.0         0.921      9.10      0.90       26.80       21.10       0.0
P 5099      431.30     4585.20      0.0        0.0         0.633     10.10      1.00       15.80       21.10       0.0
P 5099      431.30     4585.20      0.0        0.0         0.633     10.10      1.10       14.20       21.10       0.0
P 5099      431.30     4585.20      0.0        0.0         0.777     10.10      1.10       14.20       21.10       0.0
P 5099      431.30     4585.20      0.0        0.0         0.921     10.10      1.10       14.20       21.10       0.0
P 5099      431.30     4585.20      0.0        0.0         0.921     10.10      1.10       14.20       21.10       0.0
P 5099      431.30     4585.20      0.0        0.0         0.921     10.10      1.10       14.20       21.10       0.0
P 5099      431.30     4585.20      0.0        0.0         0.202     10.10      0.90       20.20       21.10       0.0
P 5100      431.40     4584.50      0.0        0.0         0.489     14.90      1.20       53.10       21.10       0.0
P 5100      431.40     4584.50      0.0        0.0         0.403     14.90      1.20       70.70       21.10       0.0
P 5100      431.40     4584.50      0.0        0.0         0.144     14.90      1.20       53.10       21.10       0.0
P 5100      431.40     4584.50      0.0        0.0         0.288     14.90      1.20       97.50       21.10       0.0
P 5100      431.40     4584.50      0.0        0.0         0.058     14.60      1.30       48.10       21.10       0.0
P 5100      431.40     4584.50      0.0        0.0         0.058     14.60      1.30       48.10       21.10       0.0
P 5100      431.40     4584.50      0.0        0.0         0.144     14.60      1.30       48.10       21.10       0.0
P 5100      431.40     4584.50      0.0        0.0         0.144     14.60      1.30       48.10       21.10       0.0
P 5100      431.40     4584.50      0.0        0.0         0.144     20.10      1.20       43.90       21.10       0.0
P 5100      431.40     4584.80      0.0        5.355       1.123     39.60      1.70       16.80       73.90       0.0
P 5100      431.40     4584.70      0.0        4.808       1.006     39.60      1.70       17.10       73.90       0.0
P 5100      431.40     4584.50      0.0        8.062       1.699     39.60      1.70       15.40       73.90       0.0
P 5100      431.40     4584.60      0.0        7.515       1.584     39.60      1.70       16.60       73.90       0.0
P 5100      431.40     4584.50      0.0        4.808       1.006     39.60      1.70       15.40       73.90       0.0
P 5100      431.40     4584.40      0.0        7.428       0.317     39.60      3.40        6.30       71.10       0.0
P 5100      431.40     4584.30      0.0        6.766       0.288     39.60      3.40       19.20      160.00       0.0
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                                        CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID         X(KM)      Y(KM)       TX(M)   SO2(G/SEC)  TSP(G/SEC)    HS(M)      D(M)   VS(M/SEC)    TS(DC)   SA(M**2/SEC)
P 5100       431.40     4584.30       0.0       0.0        0.144       26.80      1.40      13.40      37.80       0.0
P 5100       431.40     4584.50       0.0       0.0        0.230       21.60      0.80      51.70      71.10       0.0
P 5100       431.40     4584.30       0.0       0.0        1.037       13.70      1.20      18.50      21.10       0.0
P 5100       431.40     4584.50       0.0       0.0        1.871       15.20      1.00      67.10      10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.576       18.90      1.20      31.20      10.00       0.0
P 5100       431.40     4584.60       0.0       0.0        0.518       15.20      1.10      46.90      10.00       0.0
P 5100       431.40     4584.30       0.0       0.0        1.756       13.70      1.20       0.0       21.10       0.0
P 5100       431.40     4584.30       0.0       0.0        1.123       13.70      1.20      18.50      21.10       0.0
P 5100       431.40     4584.50       0.0       0.0        0.288       15.20      0.70      27.00      10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.893       13.70      1.20      17.10      10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.720       13.70      1.20      17.10      10.00       0.0
P 5100       431.40     4584.30       0.0       0.0        0.979       13.70      1.10      21.00      21.10       0.0
P 5100       431.40     4584.50       0.0       0.0        0.374       13.70      1.20      18.50      10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.605       13.70      1.20      18.50      10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.288       13.70      1.20      18.50      10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.489       13.70      1.20      18.50      10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.489       13.70      1.20      18.50      10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.230       13.70      1.20      18.50      10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.230       15.20      0.90       0.0       10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.230       15.20      0.90      17.20      10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.230       15.20      0.90      17.20      10.00       0.0
P 5100       431.40     4584.30       0.0       0.0        1.641       13.70      3.00       0.0       45.60       0.0
P 5100       431.40     4584.50       0.0       0.0        0.058       13.70      1.20      17.10      10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.115       13.70      1.20      17.10      10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.058       13.70      1.40      29.50      48.90       0.0
P 5100       431.40     4584.50       0.0       0.0        0.115       15.20      1.20      34.00      65.60       0.0
P 5100       431.40     4584.50       0.0       0.0        0.029       13.70      0.50      61.90      65.60       0.0
P 5100       431.40     4584.50       0.0       0.0        0.029       20.70      1.00      15.10      48.90       0.0
P 5100       431.40     4584.50       0.0       0.0        0.029       20.70      1.00     151.50      48.90       0.0
P 5100       431.40     4584.50       0.0       0.0        0.029       20.70      0.60      34.90      26.70       0.0
P 5100       431.40     4584.50       0.0       0.0        0.346       14.60      0.90       0.0       10.00       0.0
P 5100       431.40     4584.50       0.0       0.0        0.115       17.40      1.10      26.40      32.20       0.0
P 5100       431.40     4584.50       0.0       0.0        0.346       14.60      0.90      20.20      21.10       0.0
P 5100       431.40     4584.30       0.0       0.0        3.253       14.60      1.20      12.10      21.10       0.0
P 5229       434.20     4584.90       0.0       0.0        0.029       12.80      0.70      16.80      21.10       0.0
P 5229       434.20     4584.90       0.0       0.0        0.029        9.10      0.70      15.90      21.10       0.0
P 5105       467.60     4586.90       0.0      17.448      1.296       51.20      1.80       4.50     315.60       0.0
P 5105       467.60     4586.90       0.0      17.448      1.296       51.20      1.80       4.50     315.60       0.0
P 5106       446.20     4587.50       0.0       0.0        4.693       13.70      1.50       2.60      37.80       0.0
P 5106       446.20     4587.50       0.0       0.0        1.382       12.20      1.20       6.10      21.10       0.0
P 5106       446.20     4587.50       0.0       0.0        3.455       18.60      1.20       2.90     648.90       0.0
P 5106       446.20     4587.50       0.0       0.0        0.029       13.70      1.20       2.00     426.70       0.0
P 5230       445.60     4588.20       0.0       0.0        1.037       76.20      2.40       1.50     265.60       0.0
P 5230       445.60     4588.20       0.0       0.0        0.921       76.20      2.40       1.40     265.60       0.0
P 5230       445.60     4588.20       0.0       0.0        0.893       76.20      2.40       1.30     265.60       0.0
P 5230       445.60     4588.20       0.0       0.0        0.086       76.20      2.40       1.40     265.60       0.0
P 5230       445.60     4588.20       0.0       0.0        0.086       76.20      2.40       1.50     265.60       0.0
P 5230       445.60     4588.20       0.0       0.0        0.979       76.20      2.40       1.40     265.60       0.0
P 5230       445.60     4588.20       0.0       0.0        1.123       76.20      2.40       1.70     265.60       0.0
P 5230       445.60     4588.20       0.0       0.0        0.921       76.20      2.40       1.40     265.60       0.0
P 5230       445.60     4588.20       0.0       0.0        1.006       76.20      2.40       1.50     265.60       0.0
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                                                  CDMI VERSION 76130,  RUN     1
SOURCE  INPUT
   ID        X(KM)       Y(KM)       TX(M)   SO2(G/SEC)  TSP(G/SEC)    HS(M)       D(M)   VS(M/SEC)    TS(DC)    SA(M**2/SEC)
P 5230      445.60     4588.20       0.0        0.0        1.814       76.20       2.40       2.70      265.60        0.0
P 5230      445.60     4588.20       0.0        0.0        1.641       76.20       2.40       2.40      265.60        0.0
P 5108      444.00     4588.30       0.0       24.013     30.145       61.00       2.70       1.90      204.40        0.0
P 5108      444.00     4588.30       0.0       24.013     30.145       61.00       2.70       1.90      204.40        0.0
P 5108      444.00     4588.30       0.0       24.013     30.145       61.00       2.70       1.90      204.40        0.0
P 5108      444.00     4588.30       0.0       24.013     30.145       45.70       2.30       2.80      204.40        0.0
P 5108      444.00     4588.30       0.0       24.013     30.145       45.70       2.30       2.80      204.40        0.0
P 5108      444.00     4588.30       0.0        0.0        2.102       30.50       1.20      17.80       23.90        0.0
P 5108      444.00     4588.30       0.0        0.0        2.159       27.40       1.20      17.80      -17.80        0.0
P 5108      444.00     4588.30       0.0        0.0        1.555       14.30       1.40      11.50       32.20        0.0
P 5108      444.00     4588.30       0.0        0.0        0.489        2.40       0.50      26.90       21.10        0.0
P 5109      444.40     4588.00       0.0       52.545     44.944       30.50       1.50       4.80      248.90        0.0
P 5109      444.40     4588.00       0.0       52.545     44.944       30.50       1.50       4.80      248.90        0.0
P 5109      444.40     4588.00       0.0       14.914     12.755       47.50       1.30       4.60      232.20        0.0
P 5109      444.40     4588.00       0.0       14.914     12.755       22.90       1.30       4.60      232.20        0.0
P 5109      444.40     4588.00       0.0       14.914     12.755       22.90       1.30       4.60      232.20        0.0
P 5109      444.40     4588.00       0.0       14.914     12.755       22.90       1.30       4.60      232.20        0.0
P 5109      444.40     4588.00       0.0       14.914     12.755       22.90       1.30       4.60      232.20        0.0
P 5109      445.00     4588.00       0.0        0.0        0.029       18.30       0.90      10.00       21.10        0.0
P 5109      445.00     4588.00       0.0        0.0        0.058       18.30       0.80      13.50       21.10        0.0
P 5109      444.40     4588.00       0.0        0.0        1.353       11.00       0.70       4.50      176.70        0.0
P 5109      444.40     4588.00       0.0        0.0       20.529       11.00       0.60       4.10       54.40        0.0
P 5110      446.60     4586.10       0.0        0.086      9.588       42.40       3.00       1.30      148.90        0.0
P 5110      446.60     4586.10       0.0        0.086      9.588       42.40       3.00       1.30      148.90        0.0
P 5110      446.60     4586.10       0.0        0.086      9.588       42.40       3.00       1.30      148.90        0.0
P 5110      446.60     4586.10       0.0        0.086      9.588       42.40       3.00       1.30      148.90        0.0
P 5233      453.30     4598.80       0.0        0.288      0.0         40.80       2.10       1.00      287.80        0.0
P 5233      453.30     4598.80       0.0        0.633      0.0         40.80       2.10       1.00      287.80        0.0
P 5113      455.60     4602.70       0.0       10.653      0.777       15.50       1.40     140.50      232.20        0.0
P 5113      455.60     4602.70       0.0        5.327      0.374       15.50       1.40     140.50      232.20        0.0
P 5235      457.90     4604.00       0.0        0.0        0.086        8.50       0.50      14.40       37.80        0.0
P 5115      457.60     4604.60       0.0       22.688      7.457       25.90       3.40       3.00      260.00        0.0
P 5115      457.60     4604.60       0.0       22.688      7.457       45.70       1.80      10.20      260.00        0.0
P 5115      457.60     4604.60       0.0       22.688      7.457       25.90       3.40       3.00      260.00        0.0
P 5115      457.10     4604.40       0.0        0.0        0.720        9.10       0.50      12.60       23.90        0.0
P 5115      457.10     4604.40       0.0        0.0        0.115       12.20       0.90       8.60       23.90        0.0
P 5115      457.10     4604.40       0.0        0.0        0.202       12.20       0.90      14.00       23.90        0.0
P 5115      457.10     4604.40       0.0        0.0        0.115       12.20       0.70      11.80       23.90        0.0
P 5115      457.10     4604.40       0.0        0.0        0.086       12.20       0.40      28.10       23.90        0.0
P 5236      456.80     4604.60       0.0        0.0        1.411        7.30       0.30       0.0        21.10        0.0
P 5116      459.10     4605.10       0.0        0.0        0.029       11.90       1.30      19.20       32.20        0.0
P 5116      459.10     4605.00       0.0        0.0        1.094       14.00       0.40      45.90       21.10        0.0
P 5116      459.10     4605.00       0.0        0.0        0.058       10.40       0.80       5.20       21.10        0.0
P 5238      456.50     4604.20       0.0       18.626      5.211       18.60       2.10      12.30      398.90        0.0
P 5238      456.50     4604.20       0.0        1.382      1.065       16.20       1.30      15.00      281.10        0.0
P 5238      456.40     4603.80       0.0        0.115      0.461       10.70       0.70      11.10       65.60        0.0
P 5238      456.40     4603.80       0.0        0.0        0.346       10.70       0.50      15.60       37.80        0.0
P 5118      459.40     4606.00       0.0        0.662      3.772       38.10       0.80      29.30      232.20        0.0
P 5118      459.40     4606.00       0.0        0.662      3.772       38.10       0.80      29.30      232.20        0.0
P 5239      451.30     4585.80       0.0        0.0        0.029       15.20       1.50       8.50       65.60        0.0
P 5120      446.90     4585.30       0.0       18.456      1.468       21.30       0.50       5.10       93.30        0.0
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                                              COMI VERSION 76130.  RUN     1
SOURCE INPUT
   ID        X(KM)      Y(KM)       TX(M)  SO2(G/SEC)  TSP(G/SEC)   HS(M)     D(M)   VS(M/SEC)   TS(DC)   SA(M**2/SEC)
P 5067      436.10     4591.60      0.0       0.0        1.987      42.70     0.0       0.0      537.80       0.0
P 5193      450.60     4598.70      0.0       0.0        0.893       0.0      0.0       0.0      -17.80       0.0
P 5193      450.60     4598.70      0.0       0.0        0.979       0.0      0.0       0.0      -17.80       0.0
P 5193      450.60     4598.70      0.0       0.0        1.123       0.0      0.0       0.0      -17.80       0.0
P 51[illegible]3      450.60     4598.70      0.0       0.0        0.749      91.40     0.0       0.0      -17.80       0.0
P 5194      438.50     4589.70      0.0       0.0        0.058      16.20     0.60     18.80      76.70       0.0
P 5068      450.80     4600.00      0.0       9.501      0.058      47.20     3.30      1.30     260.00       0.0
P 5068      450.80     4600.00      0.0      23.667      0.547      47.20     3.30      1.30     260.00       0.0
P 5068      450.80     4600.00      0.0       9.501      0.518      47.20     3.30      1.30     260.00       0.0
P 5071      440.20     4593.30      0.0       9.904     14.742      69.50     2.70      4.10     248.90       0.0
P 5071      440.20     4593.30      0.0       9.904     14.742      69.50     2.70      4.10     248.90       0.0
P 5071      440.20     4593.30      0.0       9.904     14.742      69.50     2.70      4.10     248.90       0.0
P 5071      440.20     4593.30      0.0       9.904     14.742      69.50     2.70      4.10     248.90       0.0
P 5071      440.20     4593.30      0.0       9.904     14.742      69.50     2.70      4.10     248.90       0.0
P 5071      440.20     4593.30      0.0       9.904     14.742      69.50     2.70      4.10     248.90       0.0
P 5197      444.80     4590.40      0.0       0.0        1.785       0.0      0.0       0.0       15.60       0.0
P 5200      442.30     4589.70      0.0       0.0        0.432       0.0      0.0       0.0       15.60       0.0
P 5201      443.20     4592.40      0.0       0.0        0.202      13.70     0.60      5.70     148.90       0.0
P 5202      443.20     4592.40      0.0       0.0        0.173      10.70     0.30     32.30     176.70       0.0
P 5204      446.20     4592.70      0.0       0.0        0.029       0.60     0.50     18.90      10.00       0.0
P 5205      443.20     4592.40      0.0       0.0        0.115      13.40     0.40     42.90     426.70       0.0
P 5205      443.20     4592.40      0.0       0.0        0.115      13.40     0.40     42.90     426.70       0.0
P 5205      443.20     4592.40      0.0       0.0        0.115      13.40     0.40     42.90     426.70       0.0
P 5205      443.20     4592.40      0.0       0.0        0.115      13.40     0.40     42.90     426.70       0.0
P 5206      444.40     4590.40      0.0       0.0        0.086      21.30     0.70     19.70      52.20       0.0
P 5207      446.40     4593.50      0.0       0.0        1.584       7.30     0.70     11.80      10.00       0.0
P 5074      443.50     4594.00      0.0       7.716      3.541      24.40     2.30      1.50     204.40       0.0
P 5074      443.50     4594.00      0.0       7.716      3.541      24.40     2.30      1.50     204.40       0.0
P 5079      449.20     4595.00      0.0      15.029      7.371      58.50     4.10      0.20     341.70       0.0
P 5079      449.20     4595.00      0.0      15.029      7.371      58.50     4.10      0.20     341.70       0.0
P 5079      449.20     4595.00      0.0      15.029      7.371      59.10     3.30      1.40     371.10       0.0
P 5079      449.20     4595.00      0.0      15.029      7.371      59.10     3.30      1.40     371.10       0.0
P 5079      449.20     4595.00      0.0      15.029      7.371      59.10     3.30      1.40     371.10       0.0
P 5079      449.20     4595.00      0.0      15.029      7.371      59.10     3.30      1.40     371.10       0.0
P 5211      440.20     4593.80      0.0       0.0        8.839      13.70     0.80     12.40      93.50       0.0
P 5211      440.20     4593.80      0.0       0.0        0.893      13.70     1.40     12.90      37.80       0.0
P 5212      442.80     4590.90      0.0       0.0        6.392      19.80     1.20     14.60      72.20       0.0
P 5212      442.80     4590.90      0.0       0.0        4.549      19.80     1.20     13.50      66.70       0.0
P 5213      443.60     4591.00      0.0       0.0        0.144      12.20     0.90     19.60     121.10       0.0
P 5271      443.80     4591.50      0.0       0.0        0.086       7.60     0.70     30.60      37.80       0.0
P 5085      452.30     4600.10      0.0       2.591      1.411      53.30     3.00      0.20     260.00       0.0
P 5085      452.30     4600.10      0.0       2.591      1.411      53.30     3.00      0.20     260.00       0.0
P 5085      452.30     4600.10      0.0       2.591      1.411      53.30     3.00      0.20     260.00       0.0
P 5260      446.20     4594.60      0.0       1.152      0.346      52.40     1.20      1.20     315.60       0.0
P 5260      446.20     4594.60      0.0       1.152      0.346      52.40     1.20      1.20     315.60       0.0
P 5087      453.60     4579.30      0.0       0.0        0.202       7.90     0.30     31.10      10.00       0.0
P 5087      453.60     4579.30      0.0       0.0        0.029       4.30     0.90     20.20      23.90       0.0
P 5087      453.60     4579.30      0.0       0.0        0.029       4.60     0.0       0.0       21.10       0.0
P 5087      453.60     4579.30      0.0       0.0        0.576       8.50     0.50     25.40      10.00       0.0
P 5089      455.10     4580.10      0.0       0.0        0.115      15.20     0.10     35.90      10.00       0.0
P 5091      458.40     4584.40      0.0       0.0        0.230      12.20     1.20     23.30      76.70       0.0
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                                         COMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID       X(KM)      Y(KM)      TX(M)   SO2(G/SEC)  TSP(G/SEC)    HS(M)        D(M)    VS(M/SEC)     TS(DC)    SA(M**2/SEC)
P 5171      446.20    4594.20      0.0         0.720       0.317    18.30        1.20         2.80      193.30      0.0
P 5174      427.80    4584.70      0.0         9.617       7.457    16.80        1.40         8.80      232.20      0.0
P 5174      427.80    4584.70      0.0         9.617       7.457    16.80        1.40         8.80      232.20      0.0
P 5174      427.80    4584.70      0.0         1.037       0.0      16.80        1.40        11.00      235.00      0.0
P 5174      427.80    4584.70      0.0         5.034       0.0      18.30        1.10        29.20      221.10      0.0
P 5044      443.80    4587.30      0.0         0.0         1.362    23.80        0.90         0.0       -17.80      0.0
P 5044      443.30    4587.30      0.0         0.0         1.871    13.40        0.60        35.80      260.00      0.0
P 5044      443.30    4587.30      0.0         0.0         0.374    13.40        0.80         4.30      232.20      0.0
P 5044      443.30    4587.30      0.0         0.0         0.374    10.70        0.60         7.30      232.20      0.0
P 5044      443.30    4587.30      0.0         0.0         0.230    14.00        0.80         9.30       60.00      0.0
P 5044      443.30    4587.30      0.0         0.0         0.230    14.00        0.80         9.30       60.00      0.0
P 5044      443.30    4587.30      0.0         0.0         0.374    14.60        0.80         4.70       21.10      0.0
P 5044      443.30    4587.30      0.0         0.0         0.374    12.20        0.80         4.70       21.10      0.0
P 5044      443.30    4587.30      0.0         0.0         0.547    16.20        0.70         7.30      232.20      0.0
P 5044      443.80    4587.30      0.0         0.0         0.058     7.00        0.20        21.00       26.70      0.0
P 5044      443.30    4587.30      0.0         0.0         0.461     6.10        1.70         2.20      676.70      0.0
P 5044      443.30    4587.30      0.0         0.0         0.029     9.10        1.20         8.00      482.20      0.0
P 5176      441.50    4594.00      0.0         0.0         0.029     7.90        0.70         2.40       15.60      0.0
P 5176      441.50    4594.00      0.0         0.0         0.029     7.90        0.70         1.80       15.60      0.0
P 5177      436.30    4591.60      0.0         0.0         0.835    45.70        1.10         8.40       10.00      0.0
P 5050      443.70    4590.90      0.0         7.659       0.058    50.60        3.10        11.20      232.20      0.0
P 5050      443.70    4590.90      0.0         7.659       0.058    44.20        3.10        11.20      232.20      0.0
P 5050      443.70    4590.90      0.0         7.659       0.058    44.20        3.10        11.20      232.20      0.0
P 5050      443.70    4590.90      0.0        75.118       6.852    68.60        3.30         9.50      187.80      0.0
P 5050      443.70    4590.90      0.0        10.077       6.046    37.50        3.40         9.30      287.80      0.0
P 5050      443.70    4590.90      0.0        87.067       1.468    68.60        2.70        12.30      648.90      0.0
P 5050      443.70    4590.90      0.0         2.620       0.749    41.10        2.90         8.80      315.60      0.0
P 5050      443.70    4590.90      0.0         2.620       0.605    37.80        2.60         8.70      315.60      0.0
P 5050      444.70    4591.80      0.0         0.259     112.116    38.10        1.80        27.00      204.40      0.0
P 5050      444.20    4590.40      0.0        32.218      16.815    76.20        3.00         5.90      982.20      0.0
P 5050      444.20    4590.40      0.0        32.218      16.815    76.20        3.00         5.90      982.20      0.0
P 5050      443.70    4590.90      0.0         2.620       0.864    53.60        3.40         8.00      315.60      0.0
P 5050      443.70    4590.90      0.0         2.620       0.864    57.60        3.40         8.00      398.90      0.0
P 5050      444.40    4591.20      0.0         0.0         0.029    23.20        1.50        15.50       30.00      0.0
P 5050      444.70    4591.80      0.0         0.0         8.091    35.40        1.50        21.10       21.10      0.0
P 5050      444.40    4591.20      0.0         0.0         0.288    25.90        2.00        10.40       36.70      0.0
P 5050      444.40    4591.30      0.0         0.0         0.029    23.20        0.50       129.40       30.00      0.0
P 5050      444.40    4591.20      0.0        19.780       0.0      45.70        2.10         5.80      648.90      0.0
P 5050      444.40    4591.20      0.0        12.928       0.0      45.70        2.10         4.30      760.00      0.0
P 5050      444.50    4591.30      0.0        12.697       0.0      53.30        1.90         5.70      871.10      0.0
P 5050      444.50    4591.30      0.0        12.697       0.0      53.30        1.90         5.70      871.10      0.0
P 5050      444.50    4591.30      0.0        12.697       0.0      53.30        1.90         5.70      871.10      0.0
P 5050      444.50    4591.30      0.0        12.697       0.0      53.30        1.90         5.70      871.10      0.0
P 5050      444.50    4591.30      0.0        12.697       0.0      53.30        1.90         5.70      871.10      0.0
P 5050      444.50    4591.40      0.0         4.117       0.0      38.10        1.50         4.40      871.10      0.0
P 5050      444.50    4591.40      0.0         4.117       0.0      38.10        1.50         4.40      871.10      0.0
P 5050      444.50    4591.40      0.0         5.125       0.0      45.70        1.50         5.00      871.10      0.0
P 5050      444.50    4591.40      0.0         5.125       0.0      45.70        1.50         5.00      871.10      0.0
P 5050      444.50    4591.40      0.0         5.125       0.0      45.70        1.50         5.00      871.10      0.0
P 5050      444.50    4591.40      0.0         5.125       0.0      45.70        1.50         5.00      871.10      0.0
P 5050      444.60    4591.40      0.0         5.125       0.0      45.70        1.50         5.00      871.10      0.0
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                                              CDM1 VERSION 76130,  RUN     1
SOURCE INPUT
   ID         X(KM)       Y(KM)        TX(M)    SO2(G/SEC)   TSP(G/SEC)      HS(M)       D(M)   VS(M/SEC)      TS(DC)    SA(M**2/SEC)
P 5050       444.60      4591.40        0.0         5.125       0.0          45.70        1.50        5.00       871.10        0.0
P 5050       444.60      4591.40        0.0         4.981       0.0          45.70        1.50        5.00       871.10        0.0
P 5050       444.70      4591.80        0.0         4.549       2.793        31.70        3.50        1.10       287.80        0.0
P 5050       444.70      4591.80        0.0         4.549       2.793        31.70        3.50        1.10       287.80        0.0
P 5050       444.70      4591.80        0.0         4.549       2.793        31.70        3.50        1.10       287.80        0.0
P 5050       444.70      4591.80        0.0         4.549       2.793        31.70        3.50        1.10       287.80        0.0
P 5050       444.70      4591.80        0.0         0.0        42.324        70.40        6.10       17.50       287.80        0.0
P 5050       444.70      4591.00        0.0        28.677      14.972        76.20        3.20       12.70       982.20        0.0
P 5050       444.70      4591.00        0.0        26.949      14.079        65.50        2.70        3.30       982.20        0.0
P 5050       444.70      4591.00        0.0        26.949      14.079        68.60        2.80        3.10       982.20        0.0
P 5050       444.70      4591.00        0.0        26.949      14.079        76.20        2.80        3.10       982.20        0.0
P 5050       444.60      4591.40        0.0         7.256       0.0          51.80        2.40        8.20       760.00        0.0
P 5050       444.60      4591.40        0.0         7.256       0.0          51.80        2.40        8.20       760.00        0.0
P 5050       444.60      4591.40        0.0         7.256       0.0          51.80        2.40        8.20       760.00        0.0
P 5050       444.60      4591.40        0.0         7.256       0.0          51.80        2.40        8.20       760.00        0.0
P 5050       444.60      4591.40        0.0         7.256       0.0          51.80        2.40        8.20       760.00        0.0
P 5050       444.40      4591.20        0.0         0.0         0.115        17.70        1.50        7.30        26.70        0.0
P 5050       444.60      4591.50        0.0         2.678       0.0          39.90        4.90        1.50       760.00        0.0
P 5050       444.60      4591.50        0.0         2.678       0.0          39.90        4.90       14.70       760.00        0.0
P 5050       444.60      4591.50        0.0         2.678       0.0          39.90        4.90        1.50       760.00        0.0
P 5050       444.40      4591.20        0.0         0.0         0.374        27.40        1.20       16.20        26.70        0.0
P 5050       443.70      4590.90        0.0         2.620       0.691        41.10        2.60        3.80       315.60        0.0
P 5050       444.30      4591.70        0.0         0.0         3.138        52.40        4.90        0.0        121.10        0.0
P 5050       444.50      4591.10        0.0         0.0        13.619        30.50        4.00        0.0        121.10        0.0
P 5050       444.40      4591.70        0.0         0.0         3.138        52.40        4.90        0.0        121.10        0.0
P 5050       444.20      4591.10        0.0         0.0         2.102        51.80        5.00        0.0        121.10        0.0
P 5051       443.50      4592.80        0.0         2.879       0.806        47.50        2.10        5.90       232.20        0.0
P 5051       443.50      4592.80        0.0         2.879       0.806        47.50        2.10        5.90       232.20        0.0
P 5051       443.50      4592.80        0.0         2.879       0.806        47.50        2.10        5.90       232.20        0.0
P 5051       443.50      4592.80        0.0         2.879       0.806        47.50        2.10        5.90       232.20        0.0
P 5051       443.50      4592.80        0.0         2.879       0.806        47.50        2.10        5.90       232.20        0.0
P 5051       443.50      4592.80        0.0         2.879       0.806        47.50        2.10        5.90       232.20        0.0
P 5051       443.60      4592.70        0.0         2.620       0.403        69.80        3.40        5.70       204.40        0.0
P 5051       443.70      4592.80        0.0         2.620       1.094        64.60        3.00       11.00       204.40        0.0
P 5051       443.50      4592.80        0.0         0.0        52.545         9.10        0.0         0.0         10.00        0.0
P 5054       439.70      4591.40        0.0         0.0         0.202         1.20        0.50        0.0         10.00        0.0
P 5184       442.10      4593.40        0.0         0.0         0.144        15.20        0.60       35.80        21.10        0.0
P 5184       442.10      4593.10        0.0         0.0         0.202         7.60        0.50       13.40        37.80        0.0
P 5184       442.10      4593.40        0.0         0.0         0.144         0.0         0.0         0.0        -17.80        0.0
P 5184       442.10      4593.40        0.0         0.0         0.144         0.0         0.0         0.0        -17.80        0.0
P 5185       446.20      4598.00        0.0         0.693       0.029        11.90        0.80       25.90        43.50        0.0
P 5186       433.90      4589.50        0.0         0.0         2.447        11.60        1.10        0.0        121.10        0.0
P 5186       433.90      4589.50        0.0         0.0         0.720        12.20        0.30        0.0        121.10        0.0
P 5186       433.90      4589.50        0.0         0.0         0.720        12.20        0.30        0.0        121.10        0.0
P 5187       434.20      4589.90        0.0         0.0         0.374         9.80        0.90       18.50        18.30        0.0
P 5187       434.20      4589.90        0.0         0.0         0.029         7.90        0.50       22.20        18.30        0.0
P 5058       444.20      4593.80        0.0         0.0         0.058         7.60        3.00        3.50       121.10        0.0
P 5190       434.00      4589.90        0.0         0.0         0.058         6.10        0.50       28.70        15.60        0.0
P 5060       443.90      4592.30        0.0         2.822       0.489        76.20        4.70        0.60       154.40        0.0
P 5060       443.90      4592.30        0.0         2.822       0.489        76.20        4.70        0.60       154.40        0.0
P 5060       443.90      4592.30        0.0         2.822       0.489        76.20        4.70        0.60       154.40        0.0
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                                                 CDMI VERSION 76130,  RUN     1
SOURCE INPUT
    ID          X(KM)        Y(KM)         TX(M)   SO2(G/SEC)   TSP(G/SEC)     HS(M)        D(M)     VS(M/SEC)     TS(DC)    SA(M**2/SEC)
  P 5120        446.90       4585.30        0.0       18.456       1.468        21.30        0.50         5.10        93.30        0.0
  P 5120        446.90       4585.30        0.0        0.0         0.259        19.80        0.90         5.70        82.20        0.0
  P 5120        446.90       4585.30        0.0        0.0         0.259        19.80        0.90         5.70        82.20        0.0
  P 5120        446.90       4585.30        0.0        0.0         0.259        19.80        0.90         5.70        82.20        0.0
  P 5120        446.90       4585.30        0.0        0.0         0.259        19.80        0.90         5.70        82.20        0.0
  P 5120        446.90       4585.30        0.0        0.0         0.317        13.70        0.40         9.10        21.10        0.0
  P 5241        447.00       4585.50        0.0        0.0         2.447        14.00        1.20         1.40       982.20        0.0
  P 5242        450.90       4585.60        0.0        0.0         1.037         8.50        4.10         2.10       121.10        0.0
  P 5122        447.80       4580.90        0.0        0.0         2.994         0.0         0.0          0.0        -17.80        0.0
  P 5122        447.80       4580.90        0.0        0.0         1.296        18.30        0.90        87.50       128.90        0.0
  P 5122        447.80       4580.90        0.0        0.058       2.706        22.90        2.70         7.00       141.70        0.0
  P 5123        435.00       4591.10        0.0        0.662       0.461        30.50        2.40         8.40       426.70        0.0
  P 5123        435.00       4591.10        0.0        0.058       0.461        30.50        2.40         8.40       426.70        0.0
  P 5123        435.00       4591.10        0.0        0.0         0.230        30.50        2.40         8.40       426.70        0.0
  P 5123        435.00       4591.10        0.0        0.0         0.230        30.50        2.40         8.40       426.70        0.0
  P 5123        435.00       4591.10        0.0        0.175       0.288        30.50        2.40         8.40       426.70        0.0
  P 5245        451.90       4584.50        0.0        0.0         0.086         0.0         0.0          0.0         21.10        0.0
  P 5246        427.90       4580.30        0.0        0.0         0.921         0.0         0.0          0.0        -17.80        0.0
  P 5130        444.70       4588.30        0.0        3.685       3.138        45.70        1.50         2.80       343.30        0.0
  P 5130        443.80       4588.30        0.0      109.179       5.787        45.70        1.70        11.00        21.10        0.0
  P 5249        451.90       4585.20        0.0        0.0         1.555         9.80        0.60        19.40       676.70        0.0
  P 5249        451.90       4585.20        0.0        0.0         2.591         9.80        0.60        19.40       676.70        0.0
  P 5249        451.90       4585.20        0.0        0.0         2.591         9.80        0.60        11.70       676.70        0.0
  P 5249        451.90       4585.20        0.0        0.0         0.029         9.80        0.60        19.40       676.70        0.0
  P 5249        451.90       4585.20        0.0        0.0         2.591         9.80        0.60        19.40       676.70        0.0
  P 5249        451.90       4585.20        0.0        0.0         2.591         9.80        0.60        11.70       676.70        0.0
  P 5249        451.90       4585.20        0.0        0.0         0.029         9.80        0.60        11.70       676.70        0.0
  P 5249        451.90       4585.20        0.0        0.0         0.893         9.80        0.60        11.70       676.70        0.0
  P 5249        451.90       4585.20        0.0        0.0         2.591         9.80        0.60        11.70       676.70        0.0
  P 5249        451.90       4585.20        0.0        0.0         1.440         9.80        0.60         3.90       676.70        0.0
  P 5249        451.90       4585.20        0.0        0.0         1.497        11.00        1.80         1.00       815.60        0.0
  P 5249        451.90       4585.20        0.0        0.0         0.317         4.60        0.90        60.60        10.00        0.0
  P 5131        456.50       4573.20        0.0        0.0         0.202         6.10        1.50        10.30        65.60        0.0
  P 5250        456.20       4560.10        0.0        0.0         0.202        10.70        1.20        20.20       148.90        0.0
  P 5251        456.80       4579.40        0.0        0.0         0.058        10.10        1.20        18.80       371.10        0.0
  P 5251        456.80       4579.40        0.0        0.0         0.058        10.10        1.20        18.80       371.10        0.0
  P 5251        456.80       4579.40        0.0        0.0         0.058        10.10        1.20        26.80       626.70        0.0
  P 5251        456.80       4579.40        0.0        0.0         0.259        10.10        1.20        26.80       626.70        0.0
  P 5251        456.80       4579.40        0.0        0.0         0.086        10.10        0.80         8.10        48.90        0.0
  P 5132        435.40       4585.00        0.0        3.167       5.039        27.40        2.20         6.00       176.70        0.0
  P 5132        435.40       4585.00        0.0        3.167       5.039        27.40        2.20         6.00       176.70        0.0
  P 5132        435.40       4585.00        0.0        2.735       2.591        27.40        2.20         6.00       176.70        0.0
  P 5132        435.40       4585.00        0.0        2.735       2.591        27.40        2.20         4.70       315.60        0.0
  P 5135        434.60       4585.50        0.0        0.633       7.860        32.90        2.60         0.0        537.80        0.0
  P 5135        434.60       4585.50        0.0        0.633       7.860        32.90        2.60         0.0        537.80        0.0
  P 5254        461.90       4581.60        0.0        0.0         0.346         6.10        0.50        23.00        65.60        0.0
  P 5273        455.80       4599.00        0.0        0.0         0.115         6.10        0.0          0.0         10.00        0.0
  P 5138        456.10       4577.90        0.0        4.319       0.576        23.80        1.40         7.00       196.10        0.0
  P 5138        456.10       4577.90        0.0        4.319       0.576        23.80        1.40         7.00       196.10        0.0
  P 5138        456.10       4577.90        0.0        4.319       0.576        23.80        1.40         7.00       196.10        0.0
  P 5140        458.00       4586.90        0.0        2.303       3.455        30.90        2.40         1.90       315.60        0.0
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                                               CDMI VERSION 76130,  RUN      1
SOURCE INPUT
   ID        X(KM)      Y(KM)      TX(M)   SO2(G/SEC)   TSP(G/SEC)    HS(M)      D(M)    VS(M/SEC)   TS(DC)    SA(M**2/SEC)
P 5012      463.00     4613.20      0.0     2471.419      23.062     182.90      7.30      19.80     140.60       0.0
P 5014      465.40     4610.20      0.0       36.759       3.801      24.10      1.90       7.40     287.80       0.0
P 5001      412.00     4595.20      0.0       10.192       0.374      84.40      5.50       5.00     206.70       0.0
P 5001      412.00     4595.20      0.0       10.192       0.374      84.40      5.50       5.00     206.70       0.0
P 5001      412.00     4595.20      0.0       10.192       0.374      84.40      5.50       4.70     206.70       0.0
P 5001      412.00     4595.20      0.0       10.192       0.374      84.40      5.50       4.70     206.70       0.0
P 5001      412.00     4595.20      0.0       10.192       0.374      84.40      5.50       4.70     206.70       0.0
P 5001      412.00     4595.20      0.0       10.192       0.374      84.40      5.50       4.70     206.70       0.0
P 5001      412.00     4595.20      0.0       10.192       0.374      84.40      5.50       4.70     206.70       0.0
P 5001      412.00     4595.20      0.0       10.192       0.374      84.40      5.50       4.70     206.70       0.0
P 5001      412.00     4595.20      0.0        1.929       0.029      84.40      5.50       5.00     206.70       0.0
P 5001      412.00     4595.20      0.0      386.820      45.059      89.90      4.00      15.30     130.00       0.0
P 5001      412.00     4595.20      0.0      960.156      59.887     119.50      5.20      14.30     115.60       0.0
P 5001      412.00     4595.20      0.0     2705.613      26.850     182.90      7.30      19.80    1565.60       0.0
P 5001      412.00     4595.20      0.0      386.820      45.059      89.90      4.00      15.30     130.00       0.0
P 5002      405.30     4579.80      0.0       36.911     132.875      20.40      1.20       0.90     287.80       0.0
P 5002      405.30     4579.80      0.0       36.911     132.875      20.40      1.20       0.90     287.80       0.0
P 5002      405.30     4579.80      0.0       36.911     155.016      20.40      1.20       1.00     168.30       0.0
P 5003      400.60     4591.30      0.0       76.788       1.008      77.40      5.20       6.80     175.60       0.0
P 5003      400.60     4591.30      0.0       78.113       1.037      77.40      5.20       6.80     175.60       0.0
P 5003      400.60     4591.30      0.0      346.195      15.461      85.30      3.20      18.30     140.60       0.0
P 5004      404.40     4590.80      0.0       18.340       0.058      29.90      2.40       7.60     232.20       0.0
P 5004      404.40     4590.80      0.0       18.340       0.058      29.90      2.40       7.60     232.20       0.0
P 5004      404.40     4590.80      0.0       18.340       0.058      29.90      2.40       7.60     232.20       0.0
P 5004      404.40     4590.80      0.0       18.340       0.058      29.90      2.40       7.60     232.20       0.0
P 5004      404.40     4590.80      0.0       18.340       0.058      29.90      2.40       7.60     232.20       0.0
P 5004      404.40     4590.80      0.0       18.340       0.058      29.90      2.40       7.60     232.20       0.0
P 5004      404.40     4590.80      0.0        3.138       0.979      29.90      2.40      15.00     232.20       0.0
P 5004      404.40     4590.80      0.0        3.138       0.979      29.90      2.40      15.00     232.20       0.0
P 5004      404.40     4590.80      0.0        3.138       0.979      29.90      2.40      15.00     232.20       0.0
P 5004      404.40     4590.80      0.0       51.826       0.0        35.70      3.00      19.10     232.20       0.0
P 5004      404.40     4590.80      0.0        0.0        22.026      38.10      1.80      27.70     982.20       0.0
P 5004      404.40     4590.80      0.0        0.0        22.256      62.80      2.70       6.30     315.60       0.0
P 5004      404.40     4590.80      0.0        0.0        34.464      66.30      3.00       6.50     315.60       0.0
P 5004      404.40     4590.80      0.0        0.0        35.011      68.30      3.00       7.70     315.60       0.0
P 5004      404.40     4590.80      0.0        0.0        18.628      68.30      2.40       8.30     315.60       0.0
P 5004      404.40     4590.80      0.0       48.169      32.420       0.0       0.0        0.0      -17.80       0.0
P 5004      404.40     4590.80      0.0       45.779      31.470       0.0       0.0        0.0      -17.80       0.0
P 5004      404.40     4590.80      0.0       16.642      10.626       0.0       0.0        0.0      -17.80       0.0
P 5004      404.40     4590.80      0.0        0.0         1.353      16.80      0.80      21.10      37.80       0.0
P 5004      404.40     4590.80      0.0        0.0       622.886      36.70      2.70       9.10     115.60       0.0
P 5004      404.40     4590.80      0.0        0.0        23.034      29.00      2.10       8.60      45.00       0.0
P 5005      394.00     4586.50      0.0       12.294       3.225      24.40      1.70       7.50     192.20       0.0
P 5005      394.00     4586.50      0.0       12.294       3.225      24.40      1.70       7.50     192.20       0.0
P 5005      394.00     4586.50      0.0       12.294       3.225      24.40      1.70       7.50     192.20       0.0
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SOURCE INPUT                                      CDM1 VERSION 78130,  RUN     1
   ID        X(KM)     Y(KM)      TX(M)  SO2(G/SEC)  TSP(G/SEC)   HS(M)    D(M)  VS(M/SEC)   TS(DC)  SA(M**2/SEC)
 0 1600     425.00   4570.00    5000.00     0.996      2.332      10.00    0.0      0.0       0.0       0.0
 0 1600     430.00   4570.00    5000.00     0.984      2.080      10.00    0.0      0.0       0.0       0.0
 0 1600     435.00   4570.00    5000.00     0.938      2.050      10.00    0.0      0.0       0.0       0.0
 0 1600     440.00   4570.00    5000.00     1.125      2.205      10.00    0.0      0.0       0.0       0.0
 0 1600     445.00   4570.00    5000.00     1.077      2.164      10.00    0.0      0.0       0.0       0.0
 0 1600     420.00   4575.00    5000.00     0.981      2.082      10.00    0.0      0.0       0.0       0.0
 0 1600     425.00   4575.00    5000.00     1.842      2.951      10.00    0.0      0.0       0.0       0.0
 0 1600     430.00   4575.00    5000.00     1.218      2.287      10.00    0.0      0.0       0.0       0.0
 0 1600     435.00   4575.00    5000.00     1.783      2.928      10.00    0.0      0.0       0.0       0.0
 0 1600     440.00   4575.00    5000.00     1.309      2.407      10.00    0.0      0.0       0.0       0.0
 0 1600     445.00   4575.00    5000.00     1.033      2.118      10.00    0.0      0.0       0.0       0.0
 0 1600     420.00   4580.00    5000.00     1.701      2.807      10.00    0.0      0.0       0.0       0.0
 0 1600     425.00   4580.00    2500.00     0.369      0.658      10.00    0.0      0.0       0.0       0.0
 0 1600     427.50   4580.00    2500.00     0.530      0.831      10.00    0.0      0.0       0.0       0.0
 0 1600     425.00   4582.50    2500.00     0.163      0.406      10.00    0.0      0.0       0.0       0.0
 0 1600     427.50   4582.50    2500.00     0.433      1.285      10.00    0.0      0.0       0.0       0.0
 0 1600     430.00   4580.00    2500.00     0.442      0.750      10.00    0.0      0.0       0.0       0.0
 0 1600     432.50   4580.00    2500.00     0.564      0.878      10.00    0.0      0.0       0.0       0.0
 0 1600     430.00   4582.50    2500.00     0.579      0.933      10.00    0.0      0.0       0.0       0.0
 0 1600     432.50   4582.50    2500.00     0.844      1.182      10.00    0.0      0.0       0.0       0.0
 0 1600     435.00   4580.00    2500.00     1.199      1.557      10.00    0.0      0.0       0.0       0.0
 0 1600     437.50   4580.00    2500.00     0.673      0.988      10.00    0.0      0.0       0.0       0.0
 0 1600     435.00   4582.50    2500.00     1.006      1.338      10.00    0.0      0.0       0.0       0.0
 0 1600     437.50   4582.50    2500.00     1.423      1.810      10.00    0.0      0.0       0.0       0.0
 0 1600     440.00   4580.00    2500.00     0.893      1.248      10.00    0.0      0.0       0.0       0.0
 0 1600     442.50   4580.00    2500.00     0.525      0.832      10.00    0.0      0.0       0.0       0.0
 0 1600     440.00   4582.50    2500.00     1.364      1.744      10.00    0.0      0.0       0.0       0.0
 0 1600     442.50   4582.50    2500.00     0.360      0.662      10.00    0.0      0.0       0.0       0.0
 0 1600     445.00   4580.00    2500.00     0.342      0.641      10.00    0.0      0.0       0.0       0.0
 0 1600     447.50   4580.00    2500.00     0.314      0.728      10.00    0.0      0.0       0.0       0.0
 0 1600     445.00   4582.50    2500.00     0.369      0.843      10.00    0.0      0.0       0.0       0.0
 0 1600     447.50   4582.50    2500.00     0.623      0.918      10.00    0.0      0.0       0.0       0.0
 0 1600     450.00   4580.00    2500.00     0.431      0.721      10.00    0.0      0.0       0.0       0.0
 0 1600     452.50   4580.00    2500.00     0.382      0.651      10.00    0.0      0.0       0.0       0.0
 0 1600     450.00   4582.50    2500.00     1.218      1.002      10.00    0.0      0.0       0.0       0.0
 0 1600     452.50   4582.50    2500.00     1.384      1.538      10.00    0.0      0.0       0.0       0.0
 0 1600     455.00   4580.00    2500.00     0.801      1.103      10.00    0.0      0.0       0.0       0.0
 0 1600     457.50   4580.00    2500.00     0.380      0.673      10.00    0.0      0.0       0.0       0.0
 0 1600     455.00   4582.50    2500.00     0.717      1.022      10.00    0.0      0.0       0.0       0.0
 0 1600     457.50   4582.50    2500.00     0.383      0.657      10.00    0.0      0.0       0.0       0.0
 0 1600     460.00   4580.00    5000.00     1.232      2.259      10.00    0.0      0.0       0.0       0.0
 0 1600     420.00   4585.00    5000.00     1.770      2.900      10.00    0.0      0.0       0.0       0.0
 0 1600     425.00   4585.00    2500.00     0.699      1.012      10.00    0.0      0.0       0.0       0.0
 0 1600     427.50   4585.00    2500.00     0.551      0.858      10.00    0.0      0.0       0.0       0.0
 0 1600     425.00   4587.50    2500.00     0.725      1.048      10.00    0.0      0.0       0.0       0.0
 0 1600     427.50   4587.50    2500.00     0.798      1.104      10.00    0.0      0.0       0.0       0.0
 0 1600     430.00   4585.00    2500.00     0.946      1.273      10.00    0.0      0.0       0.0       0.0
 0 1600     432.50   4585.00    2500.00     0.902      1.199      10.00    0.0      0.0       0.0       0.0
 0 1600     430.00   4587.50    2500.00     1.183      1.521      10.00    0.0      0.0       0.0       0.0
 0 1600     432.50   4587.50    2500.00     1.361      1.698      10.00    0.0      0.0       0.0       0.0
 0 1600     435.00   4585.00    2500.00     0.505      0.771      10.00    0.0      0.0       0.0       0.0
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                                                   CDM1 VERSION 78130,  RUN     1
SOURCE INPUT
   ID          X(KM)       Y(KM)      TX(M)    SO2(G/SEC)   TSP(G/SEC)     HS(M)       D(M)    VS(M/SEC)      TS(DC)   SA(M**2/SEC)
0 1600        437.50     4585.00    2500.00         1.153        1.479     10.00        0.0          0.0         0.0          0.0
0 1600        435.00     4587.50    2500.00         1.359        1.705     10.00        0.0          0.0         0.0          0.0
0 1600        437.50     4587.50    2500.00         1.010        1.327     10.00        0.0          0.0         0.0          0.0
0 1600        440.00     4585.00    2500.00         1.535        1.889     10.00        0.0          0.0         0.0          0.0
0 1600        442.50     4585.00    2500.00         0.483        1.182     10.00        0.0          0.0         0.0          0.0
0 1600        440.00     4587.50    2500.00         1.500        1.839     10.00        0.0          0.0         0.0          0.0
0 1600        442.50     4587.50    2500.00         0.460        1.420     10.00        0.0          0.0         0.0          0.0
0 1600        445.00     4585.00    2500.00         0.791        1.528     10.00        0.0          0.0         0.0          0.0
0 1600        447.50     4585.00    2500.00         3.719        4.286     10.00        0.0          0.0         0.0          0.0
0 1600        445.00     4587.50    2500.00         1.364        1.677     10.00        0.0          0.0         0.0          0.0
0 1600        447.50     4587.50    2500.00         1.459        1.798     10.00        0.0          0.0         0.0          0.0
0 1600        450.00     4585.00    2500.00         3.892        4.482     10.00        0.0          0.0         0.0          0.0
0 1600        452.50     4585.00    2500.00         2.710        3.211     10.00        0.0          0.0         0.0          0.0
0 1600        450.00     4587.50    2500.00         0.188        0.417     10.00        0.0          0.0         0.0          0.0
0 1600        452.50     4587.50    2500.00         0.163        0.406     10.00        0.0          0.0         0.0          0.0
0 1600        455.00     4585.00    2500.00         1.334        1.655     10.00        0.0          0.0         0.0          0.0
0 1600        457.50     4585.00    2500.00         0.504        0.790     10.00        0.0          0.0         0.0          0.0
0 1600        455.00     4587.50    2500.00         0.541        0.847     10.00        0.0          0.0         0.0          0.0
0 1600        457.50     4587.50    2500.00         0.305        0.664     10.00        0.0          0.0         0.0          0.0
0 1600        460.00     4585.00    5000.00         1.037        2.224     10.00        0.0          0.0         0.0          0.0
0 1600        420.00     4590.00    5000.00         2.971        2.876     10.00        0.0          0.0         0.0          0.0
0 1600        425.00     4590.00    2500.00         1.187        0.879     10.00        0.0          0.0         0.0          0.0
0 1600        427.50     4590.00    2500.00         1.589        1.283     10.00        0.0          0.0         0.0          0.0
0 1600        430.00     4590.00    2500.00         1.245        1.576     10.00        0.0          0.0         0.0          0.0
0 1600        432.50     4590.00    2500.00         1.845        2.213     10.00        0.0          0.0         0.0          0.0
0 1600        430.00     4592.50    2500.00         1.384        1.080     10.00        0.0          0.0         0.0          0.0
0 1600        432.50     4592.50    2500.00         1.020        1.318     10.00        0.0          0.0         0.0          0.0
0 1600        435.00     4590.00    2500.00         1.620        2.051     10.00        0.0          0.0         0.0          0.0
0 1600        437.50     4590.00    2500.00         2.092        2.736     10.00        0.0          0.0         0.0          0.0
0 1600        435.00     4592.50    2500.00         1.776        1.419     10.00        0.0          0.0         0.0          0.0
0 1600        437.50     4592.50    2500.00         1.235        1.610     10.00        0.0          0.0         0.0          0.0
0 1600        440.00     4590.00    2500.00         1.418        1.755     10.00        0.0          0.0         0.0          0.0
0 1600        442.50     4590.00    2500.00         0.759        1.030     10.00        0.0          0.0         0.0          0.0
0 1600        440.00     4592.50    2500.00         1.049        0.816     10.00        0.0          0.0         0.0          0.0
0 1600        442.50     4592.50    2500.00         1.857        2.464     10.00        0.0          0.0         0.0          0.0
0 1600        445.00     4590.00    2500.00         1.495        1.819     10.00        0.0          0.0         0.0          0.0
0 1600        447.50     4590.00    2500.00         0.566        0.813     10.00        0.0          0.0         0.0          0.0
0 1600        445.00     4592.50    2500.00         2.374        2.730     10.00        0.0          0.0         0.0          0.0
0 1600        447.50     4592.50    2500.00         1.962        2.477     10.00        0.0          0.0         0.0          0.0
0 1600        450.00     4590.00    2500.00         0.685        0.942     10.00        0.0          0.0         0.0          0.0
0 1600        452.50     4590.00    2500.00         0.249        0.619     10.00        0.0          0.0         0.0          0.0
0 1600        450.00     4592.50    2500.00         1.141        1.459     10.00        0.0          0.0         0.0          0.0
0 1600        452.50     4592.50    2500.00         1.478        1.859     10.00        0.0          0.0         0.0          0.0
0 1600        455.00     4590.00    2500.00         0.362        0.661     10.00        0.0          0.0         0.0          0.0
0 1600        457.50     4590.00    2500.00         0.290        0.627     10.00        0.0          0.0         0.0          0.0
0 1600        455.00     4592.50    2500.00         0.994        1.358     10.00        0.0          0.0         0.0          0.0
0 1600        457.50     4592.50    2500.00         0.376        0.672     10.00        0.0          0.0         0.0          0.0
0 1600        460.00     4590.00    5000.00         1.199        2.269     10.00        0.0          0.0         0.0          0.0
0 1600        445.00     4595.00    2500.00         4.034        3.535     10.00        0.0          0.0         0.0          0.0
0 1600        447.50     4595.00    2500.00         2.467        2.946     10.00        0.0          0.0         0.0          0.0
0 1600        445.00     4597.50    2500.00         1.111        1.062     10.00        0.0          0.0         0.0          0.0
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                                                          CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID          X(KM)       Y(KM)      TX(M)    SO2(G/SEC)   TSP(G/SEC)      HS(M)       D(M)   VS(M/SEC)      TS(DC)    SA(M**2/SEC)
0 1600        447.50     4597.50    2500.00        3.068        2.956      10.00        0.0         0.0         0.0         0.0
0 1600        450.00     4595.00    2500.00        1.634        1.778      10.00        0.0         0.0         0.0         0.0
0 1600        452.50     4595.00    2500.00        1.076        1.413      10.00        0.0         0.0         0.0         0.0
0 1600        450.00     4597.50    2500.00        2.372        3.000      10.00        0.0         0.0         0.0         0.0
0 1600        452.50     4597.50    2500.00        1.628        1.902      10.00        0.0         0.0         0.0         0.0
0 1600        455.00     4595.00    2500.00        1.034        1.381      10.00        0.0         0.0         0.0         0.0
0 1600        457.50     4595.00    2500.00        0.774        1.098      10.00        0.0         0.0         0.0         0.0
0 1600        455.00     4597.50    2500.00        0.717        1.034      10.00        0.0         0.0         0.0         0.0
0 1600        457.50     4597.50    2500.00        0.497        0.803      10.00        0.0         0.0         0.0         0.0
0 1600        460.00     4595.00    5000.00        2.069        3.190      10.00        0.0         0.0         0.0         0.0
0 1600        450.00     4600.00    2500.00        1.758        1.813      10.00        0.0         0.0         0.0         0.0
0 1600        452.50     4600.00    2500.00        2.291        2.277      10.00        0.0         0.0         0.0         0.0
0 1600        452.50     4602.50    2500.00        1.741        1.444      10.00        0.0         0.0         0.0         0.0
0 1600        455.00     4600.00    2500.00        0.623        0.914      10.00        0.0         0.0         0.0         0.0
0 1600        457.50     4600.00    2500.00        0.609        1.307      10.00        0.0         0.0         0.0         0.0
0 1600        455.00     4602.50    2500.00        1.017        1.278      10.00        0.0         0.0         0.0         0.0
0 1600        457.50     4602.50    2500.00        0.648        1.328      10.00        0.0         0.0         0.0         0.0
0 1600        460.00     4600.00    2500.00        0.373        0.673      10.00        0.0         0.0         0.0         0.0
0 1600        462.50     4600.00    2500.00        0.163        0.406      10.00        0.0         0.0         0.0         0.0
0 1600        455.00     4605.00    2500.00        2.102        1.851      10.00        0.0         0.0         0.0         0.0
0 1600        457.50     4605.00    2500.00        1.487        2.298      10.00        0.0         0.0         0.0         0.0
0 2380        470.00     4575.00   10000.00        1.373        0.520      10.00        0.0         0.0         0.0         0.0
0 2380        480.00     4575.00   10000.00        0.883        0.552      10.00        0.0         0.0         0.0         0.0
0 2380        490.00     4575.00   10000.00        0.769        0.568      10.00        0.0         0.0         0.0         0.0
0 2380        465.00     4580.00    5000.00        0.414        0.432      10.00        0.0         0.0         0.0         0.0
0 2380        465.00     4585.00    5000.00        1.029        0.295      10.00        0.0         0.0         0.0         0.0
0 2380        470.00     4585.00    5000.00        1.072        0.302      10.00        0.0         0.0         0.0         0.0
0 2380        475.00     4585.00    5000.00        0.592        0.248      10.00        0.0         0.0         0.0         0.0
0 2380        480.00     4585.00   10000.00        2.058        0.595      10.00        0.0         0.0         0.0         0.0
0 2380        490.00     4585.00   10000.00        1.400        0.594      10.00        0.0         0.0         0.0         0.0
0 2380        465.00     4590.00    5000.00        0.804        0.263      10.00        0.0         0.0         0.0         0.0
0 2380        470.00     4590.00    5000.00        0.480        0.277      10.00        0.0         0.0         0.0         0.0
0 2380        475.00     4590.00    5000.00        0.0          0.0        10.00        0.0         0.0         0.0         0.0
0 2380        465.00     4595.00    5000.00        0.505        0.247      10.00        0.0         0.0         0.0         0.0
0 2380        470.00     4595.00    5000.00        2.534        0.606      10.00        0.0         0.0         0.0         0.0
0 2380        475.00     4595.00    5000.00        0.556        0.230      10.00        0.0         0.0         0.0         0.0
0 2380        480.00     4595.00   10000.00        2.866        0.816      10.00        0.0         0.0         0.0         0.0
0 2380        490.00     4595.00   10000.00        0.755        0.647      10.00        0.0         0.0         0.0         0.0
0 2380        475.00     4600.00    5000.00        0.0          0.0        10.00        0.0         0.0         0.0         0.0
0 2380        475.00     4605.00    5000.00        0.973        0.286      10.00        0.0         0.0         0.0         0.0
0 2380        480.00     4605.00    5000.00        2.061        4.383      10.00        0.0         0.0         0.0         0.0
0 2380        485.00     4605.00    5000.00        0.825        0.267      10.00        0.0         0.0         0.0         0.0
0 2380        490.00     4605.00   10000.00        1.094        0.562      10.00        0.0         0.0         0.0         0.0
0 3280        460.00     4602.50    2500.00        0.782        0.516      10.00        0.0         0.0         0.0         0.0
0 3280        462.50     4602.50    2500.00        0.434        0.772      10.00        0.0         0.0         0.0         0.0
0 3280        465.00     4600.00    5000.00        0.842        1.138      10.00        0.0         0.0         0.0         0.0
0 3280        470.00     4600.00    5000.00        0.840        1.060      10.00        0.0         0.0         0.0         0.0
0 3280        460.00     4605.00    2500.00        2.798        1.488      10.00        0.0         0.0         0.0         0.0
0 3280        462.50     4605.00    2500.00        0.743        0.505      10.00        0.0         0.0         0.0         0.0
0 3280        460.00     4607.50    2500.00        3.004        1.486      10.00        0.0         0.0         0.0         0.0
0 3280        462.50     4607.50    2500.00        1.150        0.610      10.00        0.0         0.0         0.0         0.0
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                                        CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID        X(KM)       Y(KM)       TX(M)    SO2(G/SEC)  TSP(G/SEC)    HS(M)      D(M)   VS(M/SEC)    TS(DC)   DA(M**2/SEC)
0 3280      465.00     4605.00     5000.00       1.598       1.005      10.00      0.0        0.0        0.0        0.0
0 3280      470.00     4605.00     5000.00       0.838       1.108      10.00      0.0        0.0        0.0        0.0
0 3280      460.00     4610.00     2500.00       1.735       0.819      10.00      0.0        0.0        0.0        0.0
0 3280      462.50     4610.00     2500.00       1.451       0.812      10.00      0.0        0.0        0.0        0.0
0 3280      462.50     4612.50     2500.00       0.872       0.518      10.00      0.0        0.0        0.0        0.0
0 3280      465.00     4610.00     2500.00       0.532       0.531      10.00      0.0        0.0        0.0        0.0
0 3280      467.50     4610.00     2500.00       0.845       0.524      10.00      0.0        0.0        0.0        0.0
0 3280      465.00     4612.50     2500.00       0.945       0.990      10.00      0.0        0.0        0.0        0.0
0 3280      467.50     4612.50     2500.00       0.580       0.466      10.00      0.0        0.0        0.0        0.0
0 3280      470.00     4610.00     5000.00       2.333       1.302      10.00      0.0        0.0        0.0        0.0
0 3280      475.00     4610.00     5000.00       0.815       1.079      10.00      0.0        0.0        0.0        0.0
0 3280      480.00     4610.00     5000.00       0.893       1.234      10.00      0.0        0.0        0.0        0.0
0 3280      485.00     4610.00     5000.00       0.001       0.004      10.00      0.0        0.0        0.0        0.0
0 3280      465.00     4615.00     2500.00       1.107       0.549      10.00      0.0        0.0        0.0        0.0
0 3280      467.50     4615.00     2500.00       1.477       0.725      10.00      0.0        0.0        0.0        0.0
0 3280      470.00     4615.00     5000.00       2.662       1.301      10.00      0.0        0.0        0.0        0.0
0 3280      475.00     4615.00     5000.00       2.814       1.470      10.00      0.0        0.0        0.0        0.0
0 3280      480.00     4615.00     5000.00       1.331       0.975      10.00      0.0        0.0        0.0        0.0
0 3280      485.00     4615.00     5000.00       0.852       1.499      10.00      0.0        0.0        0.0        0.0
0 3280      490.00     4615.00    10000.00       1.850       3.007      10.00      0.0        0.0        0.0        0.0
0 3280      472.50     4620.00     2500.00       0.943       0.616      10.00      0.0        0.0        0.0        0.0
0 3280      475.00     4620.00     2500.00       1.018       0.569      10.00      0.0        0.0        0.0        0.0
0 3280      477.50     4620.00     2500.00       0.915       0.547      10.00      0.0        0.0        0.0        0.0
0 3280      475.00     4622.50     2500.00       0.342       0.051      10.00      0.0        0.0        0.0        0.0
0 3280      477.50     4622.50     2500.00       0.070       0.362      10.00      0.0        0.0        0.0        0.0
0 3280      480.00     4620.00     5000.00       2.680       3.958      10.00      0.0        0.0        0.0        0.0
0 3280      485.00     4620.00     5000.00       1.134       1.002      10.00      0.0        0.0        0.0        0.0
0 3280      485.00     4625.00     5000.00       1.956       2.946      10.00      0.0        0.0        0.0        0.0
0 3280      490.00     4625.00     5000.00       2.086       1.071      10.00      0.0        0.0        0.0        0.0
0 3280      495.00     4625.00     5000.00       1.366       2.849      10.00      0.0        0.0        0.0        0.0
0 3280      495.00     4630.00     5000.00       1.556       1.181      10.00      0.0        0.0        0.0        0.0
0 3640      390.00     4550.00    10000.00       1.312       1.261      10.00      0.0        0.0        0.0        0.0
0 3640      400.00     4555.00    10000.00       0.871       1.070      10.00      0.0        0.0        0.0        0.0
0 3640      390.00     4560.00    10000.00       0.824       1.171      10.00      0.0        0.0        0.0        0.0
0 3640      410.00     4560.00    10000.00       0.866       1.095      10.00      0.0        0.0        0.0        0.0
0 3640      400.00     4565.00    10000.00       0.860       1.214      10.00      0.0        0.0        0.0        0.0
0 3640      385.00     4570.00    10000.00       0.812       1.477      10.00      0.0        0.0        0.0        0.0
0 3640      395.00     4570.00     5000.00       1.180       1.156      10.00      0.0        0.0        0.0        0.0
0 3640      410.00     4570.00     5000.00       0.434       0.655      10.00      0.0        0.0        0.0        0.0
0 3640      415.00     4570.00     5000.00       0.539       0.640      10.00      0.0        0.0        0.0        0.0
0 3640      420.00     4570.00     5000.00       0.406       0.504      10.00      0.0        0.0        0.0        0.0
0 3640      395.00     4575.00     5000.00       0.882       0.872      10.00      0.0        0.0        0.0        0.0
0 3640      400.00     4575.00     5000.00       1.186       1.508      10.00      0.0        0.0        0.0        0.0
0 3640      405.00     4575.00     2500.00       0.203       0.267      10.00      0.0        0.0        0.0        0.0
0 3640      407.50     4575.00     2500.00       0.316       0.378      10.00      0.0        0.0        0.0        0.0
0 3640      405.00     4577.50     2500.00       1.326       1.251      10.00      0.0        0.0        0.0        0.0
0 3640      407.50     4577.50     2500.00       1.466       1.418      10.00      0.0        0.0        0.0        0.0
0 3640      410.00     4575.00     5000.00       0.359       0.492      10.00      0.0        0.0        0.0        0.0
0 3640      415.00     4575.00     5000.00       0.395       0.498      10.00      0.0        0.0        0.0        0.0
0 3640      385.00     4580.00    10000.00       1.281       1.220      10.00      0.0        0.0        0.0        0.0
0 3640      395.00     4580.00     5000.00       1.257       1.200      10.00      0.0        0.0        0.0        0.0
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                                              CDM VERSION 76130,  RUN     1
SOURCE INPUT
   ID          X(KM)        Y(KM)       IA(M)   SO2(G/SEC)   TSP(G/SEC)     HS(M)      D(M)    VS(M/SEC)    TS(DC)   SA(M**2/SEC)
0 3040        400.00      4580.00     5000.00        0.892        0.835     10.00       0.0          0.0       0.0        0.0
0 3040        405.00      4580.00     2500.00        1.493        1.400     10.00       0.0          0.0       0.0        0.0
0 3040        407.50      4580.00     2500.00        1.573        1.450     10.00       0.0          0.0       0.0        0.0
0 3040        405.00      4582.50     2500.00        0.326        0.317     10.00       0.0          0.0       0.0        0.0
0 3040        407.50      4582.50     2500.00        0.369        0.390     10.00       0.0          0.0       0.0        0.0
0 3040        410.00      4580.00     5000.00        1.067        1.040     10.00       0.0          0.0       0.0        0.0
0 3040        415.00      4580.00     5000.00        1.176        1.149     10.00       0.0          0.0       0.0        0.0
0 3040        395.00      4585.00     5000.00        1.457        1.382     10.00       0.0          0.0       0.0        0.0
0 3040        400.00      4585.00     2500.00        0.717        0.690     10.00       0.0          0.0       0.0        0.0
0 3040        402.50      4585.00     2500.00        0.658        0.632     10.00       0.0          0.0       0.0        0.0
0 3040        400.00      4587.50     2500.00        2.411        2.261     10.00       0.0          0.0       0.0        0.0
0 3040        402.50      4587.50     2500.00        1.503        1.451     10.00       0.0          0.0       0.0        0.0
0 3040        405.00      4585.00     5000.00        2.112        2.026     10.00       0.0          0.0       0.0        0.0
0 3040        410.00      4585.00     5000.00        0.590        0.634     10.00       0.0          0.0       0.0        0.0
0 3040        415.00      4585.00     5000.00        0.402        0.500     10.00       0.0          0.0       0.0        0.0
0 3040        400.00      4590.00     2500.00        1.312        1.175     10.00       0.0          0.0       0.0        0.0
0 3040        402.50      4590.00     2500.00        1.290        1.217     10.00       0.0          0.0       0.0        0.0
0 3040        405.00      4590.00     5000.00        1.373        1.320     10.00       0.0          0.0       0.0        0.0
0 3040        410.00      4590.00     5000.00        1.065        1.003     10.00       0.0          0.0       0.0        0.0
0 3040        415.00      4590.00     5000.00        0.812        0.787     10.00       0.0          0.0       0.0        0.0
1 3040        412.50      4595.00     2500.00        0.237        0.273     10.00       0.0          0.0       0.0        0.0
1 3040        415.00      4595.00     2500.00        0.176        0.253     10.00       0.0          0.0       0.0        0.0

      226 AREA SOURCE(S).       555 POINT SOURCE(S).
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APPENDIX F

EMISSION SOURCE FOR THE COLUMBUS AQMA

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                                                  CDMI VERSION 76130,  RUN     1
SOURCE INPUT
  ID        X(KM)      Y(KM)      TX(M)   SO2(G/SEC)  TSP(G/SEC)   HS(M)      D(M)   VS(M/SEC)    TS(CC)   SA(M**2/SEC)
P 5001      335.00     4410.00     0.0       80.790     14.799    189.00      1.30        2.80     246.10       0.0
P 5002      331.00     4429.20     0.0        0.0        0.058     13.70      0.50        2.30      84.40       0.0
P 5002      332.00     4428.90     0.0       18.456      0.288     20.70     10.10        1.20      93.30       0.0
P 5002      331.00     4429.20     0.0        0.576      0.202     60.70      0.90       14.00     105.00       0.0
P 5002      332.00     4429.20     0.0       20.961      0.0       60.70      1.20        6.40      60.00       0.0
P 5003      330.30     4420.40     0.0        0.0        0.259      1.50      0.0         0.0       21.10       0.0
P 5004      327.50     4427.50     0.0       13.244      1.526     26.80      1.30        0.0      315.60       0.0
P 5004      327.50     4427.50     0.0       13.244      1.526     26.80      1.30        0.0      315.60       0.0
P 5004      327.50     4427.50     0.0       13.244      1.526     26.80      1.30        0.0      315.60       0.0
P 5005      330.00     4428.10     0.0        4.088      6.305     21.00      1.30        9.50     232.20       0.0
P 5005      330.00     4428.10     0.0        0.835      0.605     27.40      1.50        1.60     232.20       0.0
P 5006      329.40     4421.10     0.0        0.0        0.576     10.70      2.70        2.80      71.10       0.0
P 5007      340.40     4428.10     0.0        0.0        0.144     10.70      1.20       14.60      71.10       0.0
P 5008      328.10     4420.20     0.0        0.0        0.288     12.80      3.00        2.30      71.10       0.0
P 5008      328.10     4420.20     0.0        0.0        1.037     13.70      1.70        8.10      71.10       0.0
P 5008      328.10     4420.20     0.0        0.144      1.152     13.70      1.70        9.80      71.10       0.0
P 5009      329.90     4427.40     0.0       22.631      4.808     45.70      2.40        2.10     315.60       0.0
P 5009      329.90     4427.40     0.0       17.966      3.801     45.70      2.40        2.10     315.60       0.0
P 5010      327.80     4425.80     0.0       13.964      5.557     33.80      2.10       11.00     176.70       0.0
P 5010      327.80     4425.80     0.0       13.964     69.331     33.80      2.10       11.00     176.70       0.0
P 5011      329.90     4428.20     0.0        1.871      8.235     20.70      3.80        1.20     204.40       0.0
P 5011      329.90     4428.20     0.0        2.850     11.977     21.30      2.40        0.0      482.20       0.0
P 5012      330.20     4428.70     0.0        0.0        0.202     33.50      1.20       16.00      32.20       0.0
P 5013      331.20     4421.40     0.0        0.0        0.893     12.20      1.40        7.80     204.40       0.0
P 5013      331.20     4421.40     0.0        0.0        0.720     14.60      1.40        5.60     204.40       0.0
P 5013      331.20     4421.40     0.0        0.0        0.979     24.40      1.40        8.40     204.40       0.0
P 5014      319.60     4424.20     0.0       32.967      6.075     39.30      1.80        9.20     318.30       0.0
P 5014      319.60     4424.20     0.0       32.967      6.075     39.30      1.80        9.20     318.30       0.0
P 5014      319.60     4424.20     0.0       32.967      6.075     39.30      1.80        9.20     318.30       0.0
P 5014      319.60     4424.20     0.0       32.967      6.075     39.30      1.80        9.20     318.90       0.0
P 5015      337.50     4427.60     0.0        0.0        1.037     30.50      2.00       10.00      46.10       0.0
P 5016      331.20     4427.20     0.0        6.104      1.382     26.80      1.50        6.20     204.40       0.0
P 5016      331.20     4427.20     0.0        6.104      1.382     26.80      1.50        6.20     204.40       0.0
P 5016      331.20     4427.20     0.0        6.104      1.382     26.80      1.50        6.20     204.40       0.0
P 5019      332.00     4429.00     0.0       14.194      2.044     24.40      1.80       12.60     260.00       0.0
P 5019      332.00     4429.00     0.0       14.194      2.044     24.40      1.80       12.60     260.00       0.0
P 5019      332.00     4429.00     0.0       14.194      2.044     24.40      1.80       12.60     260.00       0.0
P 5021      320.00     4425.00     0.0       86.808      4.895     24.10      1.50        9.10     245.00       0.0
P 5021      320.00     4425.00     0.0       86.808      4.895     24.10      1.50        9.10     245.00       0.0
P 5021      320.00     4425.00     0.0       86.808      4.895     24.10      1.50        9.10     245.00       0.0
P 5022      332.00     4421.90     0.0        0.0        1.526     38.10      1.60        9.20     398.90       0.0
P 5022      332.00     4421.90     0.0        0.0        0.029     38.10      1.60       11.70     560.00       0.0
P 5022      332.00     4421.90     0.0        0.0        0.058     24.40      1.50        7.50     171.10       0.0
P 5023      331.30     4429.50     0.0       19.003      5.816     48.80      2.60        1.20     148.90       0.0
P 5023      331.30     4429.50     0.0       19.003      5.816     48.80      2.60        1.20     148.90       0.0
P 5024      328.70     4426.00     0.0        9.012      5.701     30.50      0.50        0.0      176.70       0.0
P 5024      328.70     4426.00     0.0       30.548     19.291     24.40      0.50       48.90     176.70       0.0
P 5024      328.70     4426.00     0.0        6.277      3.973     30.50      0.50        0.0      176.70       0.0
P 5039      330.80     4421.10     0.0        1.411      2.994     61.00      1.00        4.60     220.10       0.0
P 5025      328.00     4420.00     0.0        0.489     49.637     10.70      1.80        9.70     204.40       0.0
P 5025      328.00     4420.00     0.0        0.489     49.637     10.70      1.80        9.70     204.40       0.0
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                                         CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID       X(KM)      Y(KM)       TX(M)   SO2(G/SEC)   TSP(G/SEC)   HS(M)      D(M)   VS(M/SEC)     TS(DC)   SA(M**2/SEC)
P 5027     322.60    4429.50       0.0        0.0        23.034       0.0       0.0        0.0      -17.80       0.0
P 5030     321.20    4430.70       0.0        0.0         5.758       0.0       0.0        0.0      -17.80       0.0
P 5040     330.60    4441.20       0.0        0.0         1.756      21.30      1.70       8.60      65.60       0.0
P 5031     329.10    4426.20       0.0        3.945       1.238      30.50      1.80       0.0      176.70       0.0
P 5032     324.50    4425.00       0.0       12.582       7.947      61.00      2.40       0.0      287.80       0.0
P 5032     324.50    4425.00       0.0       12.582       7.947      61.00      2.40       0.0      287.80       0.0
P 5032     324.50    4425.00       0.0       12.582       7.947      61.00      2.40       0.0      287.80       0.0
P 5033     329.70    4425.00       0.0        6.795       2.188      47.20      2.10     195.40     260.00       0.0
P 5033     329.70    4425.00       0.0        6.795       2.188      47.20      2.10     195.40     260.00       0.0
P 5033     329.70    4425.00       0.0        6.795       2.188      47.20      2.10     195.40     260.00       0.0
P 5034     337.50    4428.00       0.0        5.211       0.115      22.60      2.10       4.90     182.20       0.0
P 5034     337.50    4428.00       0.0        4.405       0.115      22.60      2.10       4.90     182.20       0.0
P 5034     337.50    4428.00       0.0        7.947       0.202      22.60      2.10       4.90     182.20       0.0
P 5034     337.50    4428.00       0.0       11.085       0.288      22.60      2.10       9.90     182.20       0.0
P 5035     334.20    4424.60       0.0        4.060       0.633      38.10      1.50       2.80     260.00       0.0
P 5035     334.20    4424.60       0.0        4.060       0.633      38.10      1.50       2.80     260.00       0.0
P 5035     334.20    4424.60       0.0        4.060       0.633      38.10      1.50       2.80     260.00       0.0
P 5036     325.00    4425.00       0.0        6.190       3.916      68.60      2.40       0.0      260.00       0.0
P 5036     325.00    4425.00       0.0        6.190       3.916      68.60      2.40       0.0      260.00       0.0
P 5036     325.00    4425.00       0.0        4.117       2.591      68.60      2.40       0.0      260.00       0.0
P 5036     325.00    4425.00       0.0        4.117       2.591      18.30      1.50       0.0      260.00       0.0
P 5038     335.00    4444.60       0.0        0.0         5.960      12.20      2.40       6.90      43.30       0.0
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                                                   CDM1 VERSION 76130,  RUN     1
SOURCE INPUT
   ID           X(KM)        Y(KM)        TX(M)     SO2(G/SEC)  TSP(G/SEC)    HS(M)       D(M)   VS(M/SEC)    TS(DC)   SA(M**2/SEC)
0 2220         310.00      4405.00     10000.00          2.162       3.495    10.00        0.0         0.0       0.0         0.0
0 2220         320.00      4405.00     10000.00          2.120       3.626    10.00        0.0         0.0       0.0         0.0
0 2220         330.00      4405.00      5000.00          0.917       1.201    10.00        0.0         0.0       0.0         0.0
0 2220         335.00      4405.00      5000.00          0.810       1.551    10.00        0.0         0.0       0.0         0.0
0 2220         330.00      4410.00      5000.00          0.839       1.119    10.00        0.0         0.0       0.0         0.0
0 2220         335.00      4410.00      5000.00          0.748       1.075    10.00        0.0         0.0       0.0         0.0
0 2220         340.00      4410.00      5000.00          0.739       1.108    10.00        0.0         0.0       0.0         0.0
0 2220         310.00      4415.00      5000.00          0.681       1.190    10.00        0.0         0.0       0.0         0.0
0 2220         315.00      4415.00      5000.00          1.457       3.493    10.00        0.0         0.0       0.0         0.0
0 2220         320.00      4415.00      5000.00          1.614       1.809    10.00        0.0         0.0       0.0         0.0
0 2220         325.00      4415.00      5000.00          0.999       1.271    10.00        0.0         0.0       0.0         0.0
0 2220         330.00      4415.00      5000.00          1.895       2.253    10.00        0.0         0.0       0.0         0.0
0 2220         335.00      4415.00      5000.00          0.666       1.102    10.00        0.0         0.0       0.0         0.0
0 2220         340.00      4415.00      5000.00          0.930       1.227    10.00        0.0         0.0       0.0         0.0
0 2220         345.00      4415.00      5000.00          0.776       1.428    10.00        0.0         0.0       0.0         0.0
0 2220         310.00      4420.00      5000.00          0.681       1.190    10.00        0.0         0.0       0.0         0.0
0 2220         315.00      4420.00      5000.00          1.243       1.443    10.00        0.0         0.0       0.0         0.0
0 2220         320.00      4420.00      2500.00          0.657       0.706    10.00        0.0         0.0       0.0         0.0
0 2220         322.50      4420.00      2500.00          0.669       0.684    10.00        0.0         0.0       0.0         0.0
0 2220         320.00      4422.50      2500.00          1.184       1.144    10.00        0.0         0.0       0.0         0.0
0 2220         322.50      4422.50      2500.00          1.978       1.868    10.00        0.0         0.0       0.0         0.0
0 2220         325.00      4420.00      2500.00          0.338       0.423    10.00        0.0         0.0       0.0         0.0
0 2220         327.50      4420.00      2500.00          0.686       0.684    10.00        0.0         0.0       0.0         0.0
0 2220         325.00      4422.50      2500.00          1.741       1.704    10.00        0.0         0.0       0.0         0.0
0 2220         327.50      4422.50      2500.00          0.934       0.838    10.00        0.0         0.0       0.0         0.0
0 2220         330.00      4420.00      2500.00          1.383       1.756    10.00        0.0         0.0       0.0         0.0
0 2220         332.50      4420.00      2500.00          0.537       0.554    10.00        0.0         0.0       0.0         0.0
0 2220         330.00      4422.50      2500.00          2.427       2.279    10.00        0.0         0.0       0.0         0.0
0 2220         332.50      4422.50      2500.00          1.364       1.328    10.00        0.0         0.0       0.0         0.0
0 2220         335.00      4420.00      2500.00          0.789       0.823    10.00        0.0         0.0       0.0         0.0
0 2220         337.50      4420.00      2500.00          0.318       0.395    10.00        0.0         0.0       0.0         0.0
0 2220         335.00      4422.50      2500.00          1.312       1.249    10.00        0.0         0.0       0.0         0.0
0 2220         337.50      4422.50      2500.00          1.416       1.372    10.00        0.0         0.0       0.0         0.0
0 2220         340.00      4420.00      2500.00          0.740       0.792    10.00        0.0         0.0       0.0         0.0
0 2220         342.50      4420.00      2500.00          0.271       0.474    10.00        0.0         0.0       0.0         0.0
0 2220         340.00      4422.50      2500.00          0.794       0.832    10.00        0.0         0.0       0.0         0.0
0 2220         342.50      4422.50      2500.00          0.656       0.708    10.00        0.0         0.0       0.0         0.0
0 2220         345.00      4420.00      5000.00          0.966       1.246    10.00        0.0         0.0       0.0         0.0
0 2220         310.00      4425.00      5000.00          0.755       1.392    10.00        0.0         0.0       0.0         0.0
0 2220         315.00      4425.00      5000.00          0.972       1.202    10.00        0.0         0.0       0.0         0.0
0 2220         320.00      4425.00      2500.00          0.510       0.528    10.00        0.0         0.0       0.0         0.0
0 2220         322.50      4425.00      2500.00          0.401       0.439    10.00        0.0         0.0       0.0         0.0
0 2220         320.00      4427.50      2500.00          0.382       0.434    10.00        0.0         0.0       0.0         0.0
0 2220         322.50      4427.50      2500.00          0.987       0.936    10.00        0.0         0.0       0.0         0.0
0 2220         325.00      4425.00      2500.00          0.784       0.734    10.00        0.0         0.0       0.0         0.0
0 2220         327.50      4425.00      2500.00          1.559       1.358    10.00        0.0         0.0       0.0         0.0
0 2220         325.00      4427.50      2500.00          0.924       0.813    10.00        0.0         0.0       0.0         0.0
0 2220         327.50      4427.50      2500.00          2.941       2.905    10.00        0.0         0.0       0.0         0.0
0 2220         330.00      4425.00      2500.00          2.735       2.426    10.00        0.0         0.0       0.0         0.0
0 2220         332.50      4425.00      2500.00          2.703       2.603    10.00        0.0         0.0       0.0         0.0
0 2220         330.00      4427.50      2500.00          1.052       1.279    10.00        0.0         0.0       0.0         0.0
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                                                          CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID           X(KM)        Y(KM)       IX(M)     SO2(G/SEC)   TSP(G/SEC)     HS(M)        D(M)    VS(M/SEC)      TS(DC)    SA(M**2/SEC)
0 2220         332.50      4427.50     2500.00          0.882        0.927     10.00         0.0          0.0         0.0          0.0
0 2220         335.00      4425.00     2500.00          1.454        1.330     10.00         0.0          0.0         0.0          0.0
0 2220         337.50      4425.00     2500.00          1.151        1.144     10.00         0.0          0.0         0.0          0.0
0 2220         335.00      4427.50     2500.00          0.447        0.484     10.00         0.0          0.0         0.0          0.0
0 2220         337.50      4427.50     2500.00          0.999        3.093     10.00         0.0          0.0         0.0          0.0
0 2220         340.00      4425.00     5000.00          0.913        1.161     10.00         0.0          0.0         0.0          0.0
0 2220         345.00      4425.00     5000.00          0.726        1.092     10.00         0.0          0.0         0.0          0.0
0 2220         310.00      4430.00     5000.00          0.755        1.392     10.00         0.0          0.0         0.0          0.0
0 2220         315.00      4430.00     5000.00          1.295        1.494     10.00         0.0          0.0         0.0          0.0
0 2220         320.00      4430.00     2500.00          0.417        0.443     10.00         0.0          0.0         0.0          0.0
0 2220         322.50      4430.00     2500.00          1.206        1.189     10.00         0.0          0.0         0.0          0.0
0 2220         320.00      4432.50     2500.00          0.406        0.475     10.00         0.0          0.0         0.0          0.0
0 2220         322.50      4432.50     2500.00          0.701        0.759     10.00         0.0          0.0         0.0          0.0
0 2220         325.00      4430.00     2500.00          0.932        0.873     10.00         0.0          0.0         0.0          0.0
0 2220         327.50      4430.00     2500.00          1.915        1.726     10.00         0.0          0.0         0.0          0.0
0 2220         325.00      4432.50     2500.00          0.664        0.685     10.00         0.0          0.0         0.0          0.0
0 2220         327.50      4432.50     2500.00          1.385        1.309     10.00         0.0          0.0         0.0          0.0
0 2220         330.00      4430.00     2500.00          1.837        1.773     10.00         0.0          0.0         0.0          0.0
0 2220         332.50      4430.00     2500.00          0.663        0.704     10.00         0.0          0.0         0.0          0.0
0 2220         330.00      4432.50     2500.00          1.254        1.247     10.00         0.0          0.0         0.0          0.0
0 2220         332.50      4432.50     2500.00          0.529        0.555     10.00         0.0          0.0         0.0          0.0
0 2220         335.00      4430.00     5000.00          1.266        1.538     10.00         0.0          0.0         0.0          0.0
0 2220         340.00      4430.00     5000.00          0.839        1.139     10.00         0.0          0.0         0.0          0.0
0 2220         345.00      4430.00     5000.00          0.710        1.281     10.00         0.0          0.0         0.0          0.0
0 2220         310.00      4435.00     5000.00          1.440        2.641     10.00         0.0          0.0         0.0          0.0
0 2220         315.00      4435.00     5000.00          0.956        1.812     10.00         0.0          0.0         0.0          0.0
0 2220         320.00      4435.00     5000.00          1.270        3.290     10.00         0.0          0.0         0.0          0.0
0 2220         325.00      4435.00     2500.00          0.649        0.659     10.00         0.0          0.0         0.0          0.0
0 2220         327.50      4435.00     2500.00          1.005        0.931     10.00         0.0          0.0         0.0          0.0
0 2220         325.00      4437.50     2500.00          0.473        0.517     10.00         0.0          0.0         0.0          0.0
0 2220         327.50      4437.50     2500.00          1.066        1.046     10.00         0.0          0.0         0.0          0.0
0 2220         330.00      4435.00     2500.00          0.828        0.873     10.00         0.0          0.0         0.0          0.0
0 2220         332.50      4435.00     2500.00          0.926        0.926     10.00         0.0          0.0         0.0          0.0
0 2220         330.00      4437.50     2500.00          0.674        0.727     10.00         0.0          0.0         0.0          0.0
0 2220         332.50      4437.50     2500.00          0.239        0.396     10.00         0.0          0.0         0.0          0.0
0 2220         335.00      4435.00     5000.00          0.794        1.111     10.00         0.0          0.0         0.0          0.0
0 2220         340.00      4435.00    10000.00          2.112        3.551     10.00         0.0          0.0         0.0          0.0
0 2220         315.00      4440.00     5000.00          0.686        1.063     10.00         0.0          0.0         0.0          0.0
0 2220         320.00      4440.00     5000.00          0.788        1.095     10.00         0.0          0.0         0.0          0.0
0 2220         325.00      4440.00     5000.00          1.161        1.395     10.00         0.0          0.0         0.0          0.0
0 2220         330.00      4440.00     5000.00          0.854        1.156     10.00         0.0          0.0         0.0          0.0
0 2220         335.00      4440.00     5000.00          1.307        1.546     10.00         0.0          0.0         0.0          0.0

        43 AREA SOURCE(S).         73 POINT SOURCE(S).
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APPENDIX G

EMISSION SOURCES FOR THE DAYTON AQMA

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                                                  CDMI VERSION 76130,  RUN     1
SOURCE INPUT
  ID           X(KM)       Y(KM)        TX(M)   SO2(G/SEC)   TSP(G/SEC)     HS(M)        D(M)    VS(M/SEC)       TS(OC)     SA(M**2/SEC)
P 5001        753.00      4424.00        0.0        0.0         1.209        30.50        0.20        0.0         -17.80        0.0
P 5001        753.00      4424.00        0.0        0.0         2.015         6.10        0.0         0.0          37.80        0.0
P 5003        772.80      4424.50        0.0        0.749       0.518        71.60        3.40        8.00        287.80        0.0
P 5003        772.80      4424.50        0.0        0.749       0.518        71.60        3.40        8.00        287.80        0.0
P 5003        772.80      4424.50        0.0        0.749       0.518        71.60        3.40        8.00        287.80        0.0
P 5003        772.80      4424.50        0.0       15.375      10.221        62.50        4.90        1.10        218.30        0.0
P 5004        776.20      4402.40        0.0        0.0         2.073        12.20        1.20        0.0         -17.80        0.0
P 5005        773.80      4423.20        0.0        0.0         1.612        20.10        1.80        0.0         -17.80        0.0
P 5005        773.80      4423.20        0.0        0.0         1.814        21.30        3.70        0.0         -17.80        0.0
P 5006        772.80      4424.20        0.0        0.0         1.037        12.20        1.80        0.0         454.40        0.0
P 5006        772.80      4424.20        0.0        0.0         1.037        12.20        1.80        0.0         454.40        0.0
P 5011        762.00      4420.40        0.0        0.0        55.050         7.90        1.50        9.80         71.10        0.0
P 5012        771.40      4429.10        0.0        0.0        50.530        10.70        1.80        3.60         71.10        0.0
P 5013        754.00      4416.00        0.0        0.0         2.620        12.20        2.10        2.60         76.70        0.0
P 5014        779.60      4426.70        0.0        0.0        22.659         7.90        1.50        5.70         75.00        0.0
P 5008        769.20      4424.00        0.0       13.388      10.365        39.60        3.00        7.80        226.70        0.0
P 5008        769.20      4424.00        0.0       15.548      12.035        39.60        3.00        7.80        204.40        0.0
P 5008        769.20      4424.00        0.0       28.706      46.643        83.80        4.60        6.40        157.80        0.0
P 5008        769.20      4424.00        0.0       59.196      93.833        83.80        4.60        6.40        157.80        0.0
P 5001        755.00      4411.00        0.0        0.0         1.440        20.70        0.50       27.30         65.60        0.0
P 5001        755.70      4411.70        0.0        9.329      29.800        58.50        4.40        8.90        176.70        0.0
P 5001        755.70      4411.70        0.0        6.651      21.248        58.50        4.40        0.10        176.70        0.0
P 5001        755.70      4411.70        0.0       10.509      33.629        58.50        4.40        0.10        176.70        0.0
P 5001        755.70      4411.70        0.0        9.242      28.706        58.50        4.40        8.90        176.70        0.0
P 5001        755.70      4411.70        0.0       16.152       5.154        43.00        2.30       12.30        148.90        0.0
P 5011        762.50      4397.40        0.0        0.0         0.086         4.00        0.50        0.0         -17.80        0.0
P 5011        762.50      4397.40        0.0        0.0         0.202         0.0         0.0         0.0         -17.80        0.0
P 5026        763.70      4394.50        0.0        8.724       0.259        24.40        1.20        6.10        260.00        0.0
P 5026        763.70      4394.50        0.0        8.724       0.259        24.40        1.20        6.10        260.00        0.0
P 5012        766.80      4409.90        0.0        0.720       0.259        38.10        2.10        0.10        276.70        0.0
P 5013        753.00      4414.00        0.0        0.0         0.058         9.10        1.70        5.10         54.40        0.0
P 5002        756.00      4413.00        0.0        0.0         4.664         8.50        0.20       72.60         21.10        0.0
P 5002        756.00      4413.00        0.0        0.0         0.547         9.10        0.30       30.30        -17.80        0.0
P 5002        756.60      4413.60        0.0       20.673       1.037        24.40        5.00        2.10        148.90        0.0
P 5002        756.50      4413.60        0.0       20.673       1.037        24.40        5.00        2.10        148.90        0.0
P 5002        756.50      4413.60        0.0       20.673       1.037        24.40        5.00        2.10        148.90        0.0
P 5002        756.50      4413.60        0.0       20.673       1.037        24.40        5.00        2.10        148.90        0.0
P 5003        748.70      4408.80        0.0        3.167       9.069        19.20        1.80        1.50        248.90        0.0
P 5003        748.70      4408.80        0.0        1.152       2.073        18.90        2.40        2.40        182.20        0.0
P 5003        748.70      4408.80        0.0        1.209       3.484        18.90        2.40        2.40        182.20        0.0
P 5003        748.70      4408.80        0.0        3.858      11.085        18.90        2.40        2.40        237.80        0.0
P 5003        748.70      4408.80        0.0        3.887      11.200        18.90        2.40        2.40        237.80        0.0
P 5003        748.70      4408.80        0.0        7.659      22.026        17.40        1.80        0.50        232.80        0.0
P 5003        748.70      4408.80        0.0        7.400      21.248        17.40        1.80        0.50        197.20        0.0
P 5004        749.90      4408.90        0.0        4.866       5.125        15.20        1.20        0.80        175.00        0.0
P 5004        749.90      4408.90        0.0       56.432       7.428        15.20        1.20        0.80        141.70        0.0
P 5005        753.00      4411.00        0.0        0.403       1.238         8.50        1.10        0.0         -17.80        0.0
P 5005        753.70      4411.60        0.0        2.562       1.065        27.40        1.10        1.60        268.90        0.0
P 5005        753.70      4411.60        0.0        6.018      17.822        25.90        1.40        1.20        279.40        0.0
P 5005        753.70      4411.60        0.0        7.313      21.594        25.90        1.40        1.70          1.70        0.0
P 5005        753.70      4411.60        0.0        8.868      26.230        25.90        1.40        1.70        279.40        0.0
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                                               CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID        X(KM)      Y(KM)       IX(M)  SO2(G/SEC)  TSP(G/SEC)   HS(M)     D(M)  VS(M/SEC)    TS(DC)  SA(M**2/SEC)
P 5006      752.20    4409.30        0.0       1.411       1.497    12.20     1.20       0.60    271.10        0.0
P 5006      752.20    4409.30        0.0       1.411       1.497    12.20     1.20       0.60    271.10        0.0
P 5006      752.20    4409.30        0.0       1.411       1.497    12.20     1.20       0.60    271.10        0.0
P 5006      752.20    4409.30        0.0       1.411       1.497    12.20     1.20       0.60    271.10        0.0
P 5007      754.20    4410.70        0.0       1.180       1.670    20.70     0.90       0.50    260.00        0.0
P 5007      754.20    4410.70        0.0       5.327      10.192     9.10     1.20       0.80    271.10        0.0
P 5008      757.50    4398.00        0.0       0.0         0.173     9.10     1.50       0.70     65.60        0.0
P 5009      781.20    4402.70        0.0       0.0        39.647     6.10     0.0        0.0      10.00        0.0
P 5018      760.50    4398.20        0.0       0.0         0.086     8.50     0.90       0.0     190.60        0.0
P 5010      759.80    4408.20        0.0       1.756       0.115    37.50     3.20       0.10    287.80        0.0
P 5010      759.80    4408.20        0.0       0.0         2.937    19.80     2.30      18.90    287.80        0.0
P 5010      759.80    4408.20        0.0       0.0         0.144    18.90     1.60      14.00    287.80        0.0
P 5045      721.00    4412.00        0.0       0.0         2.303    10.70     0.90       0.90     10.00        0.0
P 5046      737.00    4403.00        0.0       0.0         1.411    11.60     1.70       6.60     23.90        0.0
P 5046      737.00    4403.00        0.0       0.0         0.317    32.00     1.10      18.50     82.20        0.0
P 5046      737.00    4403.00        0.0       0.0         0.777    10.70     2.80       6.50     23.90        0.0
P 5046      737.00    4403.00        0.0       0.0         0.346     9.80     1.10      15.00     23.90        0.0
P 5001      741.50    4404.80        0.0       8.522       1.871    31.70     2.40      11.10    232.20        0.0
P 5001      741.50    4404.80        0.0       8.522       2.505    31.70     2.40      11.10    232.20        0.0
P 5002      740.30    4403.90        0.0       4.376       1.411    48.80     2.40      11.10    232.20        0.0
P 5002      740.30    4403.90        0.0       2.620       1.584    48.80     2.40      11.10    232.20        0.0
P 5002      740.30    4403.90        0.0       8.292       5.384    48.80     3.00      14.70    190.60        0.0
P 5002      740.30    4403.90        0.0      27.122       1.555    48.80     3.00      14.70    190.60        0.0
P 5003      739.00    4401.70        0.0       3.225       2.044    26.50     1.70       5.00    154.40        0.0
P 5003      739.00    4401.70        0.0       3.225       2.044    26.50     1.70       5.00    154.40        0.0
P 5003      739.00    4401.00        0.0       0.0         0.173     6.70     0.80      11.80     35.00        0.0
P 5004      742.00    4411.00        0.0       0.0         0.058     6.10     0.80      21.60     30.00        0.0
P 5004      742.00    4411.00        0.0       0.0         0.144     6.10     0.90      29.60     28.90        0.0
P 5004      742.00    4411.00        0.0       0.0         0.086     6.10     0.90      20.20     28.90        0.0
P 5004      742.00    4411.00        0.0       0.0         0.058     4.60     0.40      74.10     23.90        0.0
P 5004      742.00    4411.00        0.0       0.0         0.086     4.60     0.80      29.80     28.30        0.0
P 5007      740.00    4405.00        0.0       0.0         0.403    25.00     0.90     100.60    237.80        0.0
P 5007      741.00    4405.00        0.0       0.0         0.029    13.70     0.60      21.70     20.00        0.0
P 5007      741.00    4405.00        0.0       0.0         0.230    14.60     1.70      12.40     20.00        0.0
P 5007      741.00    4405.00        0.0       0.0         0.720    13.70     1.00      20.20     20.00        0.0
P 5007      741.00    4405.00        0.0       0.0         0.058    15.20     0.70      21.40     20.00        0.0
P 5007      741.00    4405.00        0.0       0.0         0.058    15.20     0.70      21.40     21.10        0.0
P 5007      741.00    4405.00        0.0       0.0         0.115    17.10     1.20      21.50     20.00        0.0
P 5007      741.00    4405.00        0.0       0.0         0.115    15.20     1.20      21.50     65.60        0.0
P 5007      741.00    4405.00        0.0       0.0         0.029    16.80     1.10      17.00     21.10        0.0
P 5050      741.00    4407.00        0.0       0.0         1.037    27.40     1.20       2.00    871.10        0.0
P 5050      741.00    4407.00        0.0       0.0         0.749    12.20     1.30       1.20     35.00        0.0
P 5051      744.00    4404.00        0.0       0.0         0.317     7.60     1.20      25.60     21.10        0.0
P 5051      744.00    4404.00        0.0       0.0         0.029     4.00     0.60      30.70     10.00        0.0
P 5008      739.70    4403.80        0.0       0.777       0.115    21.30     1.70      14.50    204.40        0.0
P 5008      739.70    4403.80        0.0       4.405       0.691    21.30     1.70      14.50    204.40        0.0
P 5008      739.70    4403.80        0.0       4.405       0.691    21.30     1.70      14.50    204.40        0.0
P 5008      739.00    4403.00        0.0       0.0         0.086    12.20     0.80      70.40     37.80        0.0
P 5009      743.00    4406.00        0.0       0.0         0.403     6.40     1.50      13.70     65.60        0.0
P 5009      743.00    4406.00        0.0       0.0         0.259    15.20     0.0        0.0     -17.80        0.0
P 5009      743.00    4406.00        0.0       0.0         0.029    12.20     0.90       0.0      60.00        0.0
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                                                   COMI VERSION 76130,  RUN     1
SOURCE INPUT
  ID        X(KM)      Y(KM)       TX(M)  SO2(G/SEC)  TSP(G/SEC)   HS(M)      D(M)   VS(M/SEC)    TS(DC)  SA(M**2/SEC)
P 5053     737.00     4405.00      0.0       0.0        0.029      22.30      0.50     10.70       21.10      0.0
P 5053     737.00     4405.00      0.0       0.0        0.173      10.10      1.10      7.00       21.10      0.0
P 5053     737.00     4405.00      0.0       0.0        0.403       8.50      0.40     19.10       21.10      0.0
P 5010     744.20     4399.80      0.0       1.209      0.230      18.30      1.60      2.90      233.30      0.0
P 5010     744.20     4399.80      0.0       1.209      0.230      18.30      1.60      2.90      233.30      0.0
P 5054     738.00     4404.00      0.0       0.0        0.259       9.10      1.80      4.30       57.20      0.0
P 5011     741.00     4404.00      0.0       0.0        0.058      25.90      4.90      0.10       54.40      0.0
P 5011     741.00     4404.00      0.0       0.0        0.086      16.80      9.80      0.10       23.90      0.0
P 5062     740.00     4404.00      0.0       0.0        0.202      12.20      0.60     32.30       98.90      0.0
P 5063     740.00     4404.00      0.0       0.0        0.202      19.50      4.60      0.10      -17.80      0.0
P 5013     738.00     4401.00      0.0       0.0        2.735      14.60      6.10      1.50       46.10      0.0
P 5013     738.00     4401.00      0.0       0.0        0.230       9.40      1.00     24.80       32.20      0.0
P 5013     738.00     4401.00      0.0       0.0        0.086      10.10      1.00     14.80       37.80      0.0
P 5065     741.00     4402.00      0.0       0.0        0.144       8.20      0.80     18.10       20.00      0.0
P 5065     741.00     4402.00      0.0       0.0        0.749       9.80      0.60    138.70       37.80      0.0
P 5019     736.60     4403.20      0.0       4.607      0.346      53.30      2.70      6.10      162.80      0.0
P 5019     736.60     4403.20      0.0       4.751      0.346      53.30      2.70      6.10      162.80      0.0
P 5019     736.60     4403.20      0.0       7.659      1.411      53.30      2.70      4.60      162.80      0.0
P 5019     736.00     4401.00      0.0       0.0        0.086      18.30      0.20    231.40       40.60      0.0
P 5022     736.00     4401.00      0.0       0.0        0.086       9.10      0.30     15.50       20.00      0.0
P 5024     743.80     4402.20      0.0       1.555      1.152      53.30      2.00      4.00      287.80      0.0
P 5024     743.80     4402.20      0.0      10.221      7.544      53.30      2.00      4.00      287.80      0.0
P 5097     742.00     4411.00      0.0       0.0        0.086       0.60      0.90      7.00       26.70      0.0
P 5097     742.00     4411.00      0.0       0.0        0.835      13.70      0.50     65.70       48.90      0.0
P 5097     742.00     4411.00      0.0       0.0        0.230      15.80      0.0       0.0        65.60      0.0
P 5097     742.00     4411.00      0.0       0.0        0.864      18.60      2.70      2.20       93.30      0.0
P 5097     742.00     4411.00      0.0       0.0        0.864      18.60      2.70      2.20       93.30      0.0
P 5097     742.00     4411.00      0.0       0.0        0.115       1.50      0.40     18.00       48.90      0.0
P 5097     742.00     4411.00      0.0       0.0        0.317      13.70      0.60      0.0        48.90      0.0
P 5097     742.00     4411.00      0.0       0.0        4.578      13.70      0.60      5.20       48.90      0.0
P 5097     742.00     4411.00      0.0       0.0        0.317      15.20      0.60      3.30       71.10      0.0
P 5098     742.00     4411.00      0.0       0.0        0.029      17.70      0.30     10.60       43.30      0.0
P 5099     742.00     4411.00      0.0       0.0        0.346      13.70      0.40      6.30       21.10      0.0
P 5099     742.00     4411.00      0.0       0.0        0.058       0.90      0.40     31.00      -17.80      0.0
P 5073     743.00     4406.00      0.0       0.0        0.230       7.90      0.50     12.30       23.90      0.0
P 5074     743.00     4406.00      0.0       0.0        5.960       7.90      1.50     11.30      482.20      0.0
P 5074     743.00     4406.00      0.0       0.0        0.173      10.10      0.50      0.0        21.10      0.0
P 5074     743.00     4406.00      0.0       0.0        0.086      10.10      0.70     11.60       23.90      0.0
P 5074     743.00     4406.00      0.0       0.0        0.029       9.10      0.40     49.10       23.90      0.0
P 5074     743.00     4406.00      0.0       0.0        1.123       9.80      1.10     15.50       29.40      0.0
P 5074     743.00     4406.00      0.0       0.0        0.777      10.70      0.90      3.20       21.10      0.0
P 5075     743.00     4406.00      0.0       0.0        1.180       9.10      0.60      9.70       23.90      0.0
P 5077     733.00     4391.00      0.0       0.0        0.029       4.60      0.60     29.10       21.10      0.0
P 5027     739.10     4401.10      0.0      44.887     67.805      93.60      4.90     12.60      210.00      0.0
P 5027     739.10     4401.10      0.0      44.887    103.162      93.60      4.90     12.60      210.00      0.0
P 5027     739.10     4401.10      0.0      56.461     17.765      93.60      4.90     12.60      210.00      0.0
P 5027     739.10     4401.10      0.0      44.887     84.850      93.60      4.90     12.60      210.00      0.0
P 5027     739.10     4401.10      0.0      44.887     84.850      93.60      4.90     12.60      210.00      0.0
P 5027     739.10     4401.10      0.0      93.776     58.390      93.60      4.90     12.60      132.20      0.0
P 5027     739.10     4401.10      0.0       0.777      0.173       0.10      0.80     24.90      381.10      0.0
P 5027     739.10     4401.10      0.0       0.777      0.173       0.10      0.80     24.90      381.10      0.0
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                                        CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID        X(KM)      Y(KM)      TX(M)   SO2(G/SEC)  TSP(G/SEC)   HS(M)      D(M)    VS(M/SEC)   TS(DC)   SA(M**2/SEC)
P 5027      739.10    4401.10      0.0       0.777       0.173      6.10      0.80      24.90     381.10       0.0
P 5027      739.10    4401.10      0.0       0.777       0.173      6.10      0.80      24.90     381.10       0.0
P 5080      738.00    4396.00      0.0       0.0         0.029      7.90      4.60       0.20      21.10       0.0
P 5031      738.10    4397.10      0.0       4.463       0.518     61.00      3.00       3.70     176.70       0.0
P 5031      738.10    4397.10      0.0       4.463       0.374     61.00      3.00       2.90     176.70       0.0
P 5031      738.10    4397.10      0.0       4.463       0.461     61.00      3.00       3.20     176.70       0.0
P 5031      738.10    4397.10      0.0       4.463       0.403     61.00      3.00       3.10     176.70       0.0
P 5033      738.00    4401.00      0.0       0.0         0.317     13.10      1.20      15.80     -17.80       0.0
P 5034      738.70    4399.90      0.0       1.785      10.048     57.00      2.40       4.00      76.70       0.0
P 5034      738.70    4399.90      0.0       1.785      10.048     57.00      2.40       4.00      76.70       0.0
P 5036      739.00    4420.00      0.0       0.0         0.058      2.10      2.40       8.60      26.70       0.0
P 5036      739.00    4420.00      0.0       0.0         0.115      4.30      4.00       6.60      26.70       0.0
P 5038      736.90    4394.80      0.0       9.213       0.288     30.50      1.80       9.80     171.10       0.0
P 5038      736.90    4394.80      0.0      13.820       0.461     36.60      2.60       6.40     160.00       0.0
P 5039      735.40    4394.50      0.0      15.807       3.225     67.10      3.00       3.60     182.20       0.0
P 5039      735.40    4394.50      0.0       0.835       1.209     67.10      3.00       3.60     182.20       0.0
P 5039      735.40    4394.50      0.0       0.835       1.209     67.10      3.00       3.60     182.20       0.0
P 5039      735.00    4394.00      0.0       0.0         0.086      6.10      0.90       0.40      37.80       0.0
P 5086      741.00    4415.00      0.0       0.0         0.835     12.20      1.60       4.00     652.20       0.0
P 5040      741.40    4413.30      0.0       2.246       4.060     57.00      2.40       4.00      76.70       0.0
P 5040      741.00    4413.30      0.0       2.246       5.384     57.00      2.40       4.00      76.70       0.0
P 5089      734.00    4395.00      0.0       0.0         0.288      9.10      2.10       3.20      54.40       0.0
P 5090      733.00    4395.00      0.0       0.0         0.346     13.70      0.80      45.90       2.20       0.0
P 5091      736.00    4395.00      0.0       0.0         7.198      9.10      0.0        0.0      148.90       0.0
P 5041      732.50    4386.60      0.0      75.291       0.403     76.20      4.20      15.90     153.30       0.0
P 5041      732.50    4386.60      0.0      65.099       0.144     76.20      4.20      15.90     153.30       0.0
P 5041      732.50    4386.60      0.0      71.404       0.950     76.20      4.20      15.40     151.70       0.0
P 5041      732.50    4386.60      0.0      85.253       2.044     76.20      4.20      15.40     151.70       0.0
P 5041      732.50    4386.60      0.0      67.517       0.510     76.20      4.20      15.40     151.70       0.0
P 5041      732.50    4386.60      0.0      55.367       0.346     76.20      4.20      15.40     151.70       0.0
P 5041      732.50    4386.60      0.0       1.209       0.346     12.20      4.30      26.60     445.00       0.0
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                                          CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID        X(KM)      Y(KM)       TX(M)    SO2(G/SEC)  TSP(G/SEC)    HS(M)      D(M)    VS(M/SEC)    TS(DC)   BA(M**2/SEC)
0 1260      770.00    4410.00    10000.00       0.781       1.015      10.00      0.0         0.0        0.0        0.0
0 1260      780.00    4410.00    10000.00       1.041       1.414      10.00      0.0         0.0        0.0        0.0
0 1260      750.00    4415.00     5000.00       1.263       1.314      10.00      0.0         0.0        0.0        0.0
0 1260      755.00    4415.00     5000.00       0.449       0.537      10.00      0.0         0.0        0.0        0.0
0 1260      760.00    4415.00     5000.00       0.653       0.680      10.00      0.0         0.0        0.0        0.0
0 1260      765.00    4415.00     5000.00       0.817       2.704      10.00      0.0         0.0        0.0        0.0
0 1260      790.00    4415.00     5000.00       0.029       0.013      10.00      0.0         0.0        0.0        0.0
0 1260      750.00    4420.00     5000.00       0.668       1.070      10.00      0.0         0.0        0.0        0.0
0 1260      755.00    4420.00     5000.00       0.396       0.582      10.00      0.0         0.0        0.0        0.0
0 1260      760.00    4420.00     5000.00       0.491       0.555      10.00      0.0         0.0        0.0        0.0
0 1260      765.00    4420.00     5000.00       1.236       1.329      10.00      0.0         0.0        0.0        0.0
0 1260      770.00    4420.00     2500.00       0.882       0.847      10.00      0.0         0.0        0.0        0.0
0 1260      772.50    4420.00     2500.00       0.883       0.847      10.00      0.0         0.0        0.0        0.0
0 1260      770.00    4422.50     2500.00       2.102       2.008      10.00      0.0         0.0        0.0        0.0
0 1260      772.50    4422.50     2500.00       2.356       1.848      10.00      0.0         0.0        0.0        0.0
0 1260      775.00    4420.00     5000.00       1.810       1.640      10.00      0.0         0.0        0.0        0.0
0 1260      780.00    4420.00    10000.00       0.784       1.200      10.00      0.0         0.0        0.0        0.0
0 1260      790.00    4420.00     5000.00       0.048       0.021      10.00      0.0         0.0        0.0        0.0
0 1260      755.00    4425.00    10000.00       0.728       1.028      10.00      0.0         0.0        0.0        0.0
0 1260      765.00    4425.00     5000.00       0.441       0.531      10.00      0.0         0.0        0.0        0.0
0 1260      770.00    4425.00     2500.00       0.725       0.667      10.00      0.0         0.0        0.0        0.0
0 1260      772.50    4425.00     2500.00       1.038       0.947      10.00      0.0         0.0        0.0        0.0
0 1260      770.00    4427.50     2500.00       0.029       0.013      10.00      0.0         0.0        0.0        0.0
0 1260      772.50    4427.50     2500.00       0.315       0.322      10.00      0.0         0.0        0.0        0.0
0 1260      775.00    4425.00     5000.00       0.600       0.700      10.00      0.0         0.0        0.0        0.0
0 1260      790.00    4425.00     5000.00       0.0         0.0        10.00      0.0         0.0        0.0        0.0
0 1260      765.00    4430.00     5000.00       0.431       0.545      10.00      0.0         0.0        0.0        0.0
0 1260      770.00    4430.00     5000.00       0.652       1.057      10.00      0.0         0.0        0.0        0.0
0 1260      775.00    4430.00     5000.00       0.777       0.790      10.00      0.0         0.0        0.0        0.0
0 1260      780.00    4430.00     5000.00       0.057       0.025      10.00      0.0         0.0        0.0        0.0
0 1260      785.00    4430.00     5000.00       0.956       2.033      10.00      0.0         0.0        0.0        0.0
0 1260      790.00    4430.00     5000.00       0.349       0.584      10.00      0.0         0.0        0.0        0.0
0 2580      750.00    4385.00    10000.00       0.655       0.705      10.00      0.0         0.0        0.0        0.0
0 2580      760.00    4385.00    10000.00       0.637       0.710      10.00      0.0         0.0        0.0        0.0
0 2580      770.00    4385.00     5000.00       0.0         0.0        10.00      0.0         0.0        0.0        0.0
0 2580      775.00    4385.00     5000.00       0.0         0.0        10.00      0.0         0.0        0.0        0.0
0 2580      780.00    4385.00     5000.00       0.214       0.295      10.00      0.0         0.0        0.0        0.0
0 2580      770.00    4390.00     5000.00       0.210       0.299      10.00      0.0         0.0        0.0        0.0
0 2580      775.00    4390.00    10000.00       0.507       0.620      10.00      0.0         0.0        0.0        0.0
0 2580      747.50    4395.00     2500.00       0.163       0.188      10.00      0.0         0.0        0.0        0.0
0 2580      747.50    4397.50     2500.00       0.328       0.344      10.00      0.0         0.0        0.0        0.0
0 2580      750.00    4395.00     5000.00       0.393       0.433      10.00      0.0         0.0        0.0        0.0
0 2580      755.00    4395.00     5000.00       0.433       0.969      10.00      0.0         0.0        0.0        0.0
0 2580      760.00    4395.00     5000.00       3.008       2.853      10.00      0.0         0.0        0.0        0.0
0 2580      765.00    4395.00     5000.00       0.044       0.019      10.00      0.0         0.0        0.0        0.0
0 2580      770.00    4395.00     5000.00       0.016       0.008      10.00      0.0         0.0        0.0        0.0
0 2580      747.50    4400.00     2500.00       0.133       0.161      10.00      0.0         0.0        0.0        0.0
0 2580      747.50    4402.50     2500.00       0.117       0.149      10.00      0.0         0.0        0.0        0.0
0 2580      750.00    4400.00     5000.00       1.169       1.167      10.00      0.0         0.0        0.0        0.0
0 2580      755.00    4400.00     5000.00       0.343       0.386      10.00      0.0         0.0        0.0        0.0
0 2580      760.00    4400.00     5000.00       0.349       0.462      10.00      0.0         0.0        0.0        0.0
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                                                   CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID            X(KM)        Y(KM)       TX(M)   SO2(G/SEC)   TSP(G/SEC)      HS(M)        D(M)    VS(M/SEC)     TS(DC)   SA(M**2/SEC)
0 2580          765.00      4400.00    10000.00        0.728        0.760      10.00        0.0          0.0        0.0        0.0
0 2580          775.00      4400.00    10000.00        0.535        0.980      10.00        0.0          0.0        0.0        0.0
0 2580          747.50      4405.00     2500.00        0.156        0.179      10.00        0.0          0.0        0.0        0.0
0 2580          747.50      4407.50     2500.00        0.015        0.007      10.00        0.0          0.0        0.0        0.0
0 2580          750.00      4405.00     5000.00        1.934        1.772      10.00        0.0          0.0        0.0        0.0
0 2580          755.00      4405.00     5000.00        0.301        0.344      10.00        0.0          0.0        0.0        0.0
0 2580          760.00      4405.00     5000.00        1.080        2.276      10.00        0.0          0.0        0.0        0.0
0 2580          750.00      4410.00     5000.00        1.092        1.105      10.00        0.0          0.0        0.0        0.0
0 2580          755.00      4410.00     5000.00        1.379        1.353      10.00        0.0          0.0        0.0        0.0
0 2580          760.00      4410.00     5000.00        0.0          0.0        10.00        0.0          0.0        0.0        0.0
0 2580          765.00      4410.00     5000.00        0.595        0.863      10.00        0.0          0.0        0.0        0.0
0 4500          715.00      4385.00     5000.00        0.296        0.677      10.00        0.0          0.0        0.0        0.0
0 4500          720.00      4385.00     5000.00        0.296        0.677      10.00        0.0          0.0        0.0        0.0
0 4500          725.00      4385.00     5000.00        0.604        1.023      10.00        0.0          0.0        0.0        0.0
0 4500          730.00      4385.00     5000.00        0.642        0.944      10.00        0.0          0.0        0.0        0.0
0 4500          735.00      4385.00     5000.00        0.396        0.836      10.00        0.0          0.0        0.0        0.0
0 4500          740.00      4385.00     5000.00        3.897        1.890      10.00        0.0          0.0        0.0        0.0
0 4500          745.00      4385.00     5000.00        0.406        0.907      10.00        0.0          0.0        0.0        0.0
0 4500          715.00      4390.00     5000.00        0.296        0.677      10.00        0.0          0.0        0.0        0.0
0 4500          720.00      4390.00    10000.00        1.574        3.336      10.00        0.0          0.0        0.0        0.0
0 4500          730.00      4390.00     5000.00        1.310        1.812      10.00        0.0          0.0        0.0        0.0
0 4500          735.00      4390.00     5000.00        1.159        1.788      10.00        0.0          0.0        0.0        0.0
0 4500          740.00      4390.00     5000.00        0.874        1.410      10.00        0.0          0.0        0.0        0.0
0 4500          745.00      4390.00     5000.00        0.832        1.372      10.00        0.0          0.0        0.0        0.0
0 4500          715.00      4395.00     5000.00        0.406        0.843      10.00        0.0          0.0        0.0        0.0
0 4500          730.00      4395.00     5000.00        0.506        0.985      10.00        0.0          0.0        0.0        0.0
0 4500          735.00      4395.00     5000.00        1.645        3.346      10.00        0.0          0.0        0.0        0.0
0 4500          740.00      4395.00     2500.00        0.265        0.408      10.00        0.0          0.0        0.0        0.0
0 4500          742.50      4395.00     2500.00        0.678        0.933      10.00        0.0          0.0        0.0        0.0
0 4500          740.00      4397.50     2500.00        0.468        0.654      10.00        0.0          0.0        0.0        0.0
0 4500          742.50      4397.50     2500.00        1.881        1.263      10.00        0.0          0.0        0.0        0.0
0 4500          745.00      4395.00     2500.00        0.476        0.691      10.00        0.0          0.0        0.0        0.0
0 4500          745.00      4397.50     2500.00        0.586        0.803      10.00        0.0          0.0        0.0        0.0
0 4500          715.00      4400.00     5000.00        0.401        0.892      10.00        0.0          0.0        0.0        0.0
0 4500          720.00      4400.00    10000.00        1.777        3.467      10.00        0.0          0.0        0.0        0.0
0 4500          730.00      4400.00     2500.00        0.219        0.362      10.00        0.0          0.0        0.0        0.0
0 4500          732.50      4400.00     2500.00        0.321        0.495      10.00        0.0          0.0        0.0        0.0
0 4500          730.00      4402.50     2500.00        0.178        0.310      10.00        0.0          0.0        0.0        0.0
0 4500          732.50      4402.50     2500.00        0.709        1.010      10.00        0.0          0.0        0.0        0.0
0 4500          735.00      4400.00     2500.00        0.512        0.713      10.00        0.0          0.0        0.0        0.0
0 4500          737.50      4400.00     2500.00        0.426        0.535      10.00        0.0          0.0        0.0        0.0
0 4500          735.00      4402.50     2500.00        1.241        1.690      10.00        0.0          0.0        0.0        0.0
0 4500          737.50      4402.50     2500.00        1.285        1.613      10.00        0.0          0.0        0.0        0.0
0 4500          740.00      4400.00     2500.00        1.248        0.764      10.00        0.0          0.0        0.0        0.0
0 4500          742.50      4400.00     2500.00        1.037        1.355      10.00        0.0          0.0        0.0        0.0
0 4500          740.00      4402.50     2500.00        1.237        1.417      10.00        0.0          0.0        0.0        0.0
0 4500          742.50      4402.50     2500.00        1.581        2.033      10.00        0.0          0.0        0.0        0.0
0 4500          745.00      4400.00     2500.00        0.954        1.222      10.00        0.0          0.0        0.0        0.0
0 4500          745.00      4402.50     2500.00        0.884        1.122      10.00        0.0          0.0        0.0        0.0
0 4500          715.00      4405.00     5000.00        0.407        0.844      10.00        0.0          0.0        0.0        0.0
0 4500          730.00      4405.00     2500.00        0.084        0.173      10.00        0.0          0.0        0.0        0.0
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                                         CDM1 VERSION 76130,  RUN     1
SOURCE INPUT
   ID           X(KM)        Y(KM)        TX(M)    SO2(G/SEC)  TSP(G/SEC)     HS(M)        D(M)    VS(M/SEC)     TS(DC)    SA(M**2/SEC)
0 4500         732.50      4405.00      2500.00        0.425       0.579      10.00        0.0          0.0         0.0          0.0
0 4500         730.00      4407.50      2500.00        0.341       0.495      10.00        0.0          0.0         0.0          0.0
0 4500         732.50      4407.50      2500.00        0.700       0.973      10.00        0.0          0.0         0.0          0.0
0 4500         735.00      4405.00      2500.00        1.066       1.397      10.00        0.0          0.0         0.0          0.0
0 4500         737.50      4405.00      2500.00        1.719       2.178      10.00        0.0          0.0         0.0          0.0
0 4500         735.00      4407.50      2500.00        0.608       0.836      10.00        0.0          0.0         0.0          0.0
0 4500         737.50      4407.50      2500.00        0.787       1.036      10.00        0.0          0.0         0.0          0.0
0 4500         740.00      4405.00      2500.00        0.967       1.055      10.00        0.0          0.0         0.0          0.0
0 4500         742.50      4405.00      2500.00        0.780       3.139      10.00        0.0          0.0         0.0          0.0
0 4500         740.00      4407.50      2500.00        0.486       0.647      10.00        0.0          0.0         0.0          0.0
0 4500         742.50      4407.50      2500.00        0.345       0.507      10.00        0.0          0.0         0.0          0.0
0 4500         745.00      4405.00      2500.00        0.940       1.271      10.00        0.0          0.0         0.0          0.0
0 4500         745.00      4407.50      2500.00        0.371       0.512      10.00        0.0          0.0         0.0          0.0
0 4500         715.00      4410.00      5000.00        0.414       0.851      10.00        0.0          0.0         0.0          0.0
0 4500         720.00      4410.00     10000.00        1.967       3.751      10.00        0.0          0.0         0.0          0.0
0 4500         730.00      4410.00      5000.00        1.260       1.431      10.00        0.0          0.0         0.0          0.0
0 4500         735.00      4410.00      5000.00        1.119       1.706      10.00        0.0          0.0         0.0          0.0
0 4500         740.00      4410.00      5000.00        0.766       1.183      10.00        0.0          0.0         0.0          0.0
0 4500         745.00      4410.00      5000.00        0.977       1.565      10.00        0.0          0.0         0.0          0.0
0 4500         715.00      4415.00      5000.00        0.414       0.851      10.00        0.0          0.0         0.0          0.0
0 4500         730.00      4415.00      5000.00        0.740       1.248      10.00        0.0          0.0         0.0          0.0
0 4500         735.00      4415.00      5000.00        1.911       2.514      10.00        0.0          0.0         0.0          0.0
0 4500         740.00      4415.00      5000.00        0.569       0.980      10.00        0.0          0.0         0.0          0.0
0 4500         745.00      4415.00      5000.00        0.946       1.527      10.00        0.0          0.0         0.0          0.0
0 4500         735.00      4420.00      2500.00        0.148       0.272      10.00        0.0          0.0         0.0          0.0

      127 AREA SOURCE(S),      184 POINT SOURCE(S).
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APPENDIX H

EMISSION SOURCES FOR THE MANSFIELD AQMA

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                                                       CDM1 VERSION 76130,  RUN     1
SOURCE INPUT
   ID          X(KM)       Y(KM)        IX(M)   SO2(G/SEC)   TSP(G/SEC)    HS(M)      D(M)    VS(M/SEC)    TS(DC)    SA(M**2/SEC)
P 5011        374.20     4520.90        0.0        0.0         0.979        5.80      0.70        6.00      10.00         0.0
P 5011        374.20     4520.90        0.0        0.0         0.979        5.80      0.70        6.00      10.00         0.0
P 5001        364.80     4514.40        0.0        3.628       0.864       27.70      1.10       13.50     188.90         0.0
P 5001        364.80     4514.40        0.0        4.837       1.152       27.70      1.10       17.10     197.80         0.0
P 5001        364.80     4514.40        0.0        4.837       1.152       27.70      1.10       16.50     198.90         0.0
P 5002        372.50     4514.40        0.0       10.221       7.169       71.60      2.40        9.90     246.10         0.0
P 5003        371.50     4515.60        0.0       16.958       4.981       24.40      1.60        5.50     287.80         0.0
P 5003        370.90     4516.60        0.0        0.0         0.259       20.00      4.50        3.00     135.00         0.0
P 5003        370.90     4516.60        0.0        0.0         0.259       20.00      4.50        3.00     135.00         0.0
P 5003        371.20     4516.20        0.0        0.0        23.782       30.80      3.30        7.50     704.40         0.0
P 5003        371.20     4516.20        0.0        0.0        23.782       50.30      1.90       22.20     704.40         0.0
P 5003        371.20     4516.20        0.0        0.0        23.782       50.30      1.90       22.20     704.40         0.0
P 5003        371.20     4516.20        0.0        0.0        23.782       47.20      2.00       21.50     704.40         0.0
P 5003        371.20     4516.20        0.0        0.0        23.782       47.20      2.00       21.50     704.40         0.0
P 5004        373.20     4513.50        0.0        0.0         0.921       21.30      1.80        0.70     121.10         0.0
P 5004        373.20     4513.50        0.0        0.0         0.921       21.30      1.80        0.70     121.10         0.0
P 5005        372.30     4514.40        0.0        3.772       1.987       45.70      2.70        3.30     246.10         0.0
P 5005        372.30     4514.40        0.0        3.772       1.987       45.70      2.70        3.30     246.10         0.0
P 5005        372.30     4514.40        0.0        0.0         3.570       14.60      1.40        0.80     982.20         0.0
P 5005        372.30     4514.40        0.0        0.0         3.570       14.60      1.40        1.10     982.20         0.0
P 5005        372.30     4514.40        0.0        0.0         3.570       14.90      1.40        1.00     982.20         0.0
P 5005        372.30     4514.40        0.0        0.0         3.570       14.90      1.40        1.00     982.20         0.0
P 5006        372.90     4513.20        0.0        5.096       1.814       31.10      1.50        3.80     176.70         0.0
P 5006        372.90     4513.20        0.0        3.397       1.209       31.70      1.50        2.50     176.70         0.0
P 5006        372.90     4513.20        0.0        2.275       0.806       31.40      1.50        2.50     176.70         0.0
P 5006        372.90     4513.20        0.0        4.405       1.555       39.60      1.50        4.00     176.70         0.0
P 5008        371.20     4513.70        0.0        0.518       1.096       21.30      1.70       12.20     131.10         0.0
P 5009        373.20     4515.90        0.0       13.216       8.839       56.90      2.70        4.80     260.00         0.0
P 5009        373.20     4515.90        0.0        3.311       2.188       54.90      2.70        1.60     260.00         0.0
P 5009        373.20     4515.90        0.0        9.904       6.622       54.90      2.70        2.40     260.00         0.0
P 5010        360.40     4526.60        0.0       11.718       2.275       68.60      2.40        2.30     148.90         0.0
P 5010        360.40     4526.60        0.0       35.213       2.275       68.60      2.40        2.30     148.90         0.0
P 5010        360.40     4526.60        0.0        0.461       0.029       68.60      2.40        0.90     148.90         0.0
P 5010        360.40     4526.60        0.0        0.461       0.029       68.60      2.40        1.50     148.90         0.0
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                                          CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID          X(KM)       Y(KM)       TX(M)   SO2(G/SEC)  TSP(G/SEC)    HS(M)     D(M)   VS(M/SEC)    TS(DC)  SA(M**2/SEC)
0 5740        365.00     4490.00    10000.00        0.071       0.031    10.00      0.0         0.0       0.0         0.0
0 5740        375.00     4490.00    10000.00        0.947       1.564    10.00      0.0         0.0       0.0         0.0
0 5740        365.00     4500.00     5000.00        0.602       0.473    10.00      0.0         0.0       0.0         0.0
0 5740        370.00     4500.00     5000.00        0.797       0.553    10.00      0.0         0.0       0.0         0.0
0 5740        375.00     4500.00    10000.00        0.933       1.011    10.00      0.0         0.0       0.0         0.0
0 5740        360.00     4505.00     5000.00        0.384       0.433    10.00      0.0         0.0       0.0         0.0
0 5740        365.00     4505.00     5000.00        0.608       0.476    10.00      0.0         0.0       0.0         0.0
0 5740        370.00     4505.00     5000.00        1.441       0.932    10.00      0.0         0.0       0.0         0.0
0 5740        355.00     4510.00    10000.00        1.313       1.009    10.00      0.0         0.0       0.0         0.0
0 5740        365.00     4510.00     5000.00        2.029       1.216    10.00      0.0         0.0       0.0         0.0
0 5740        370.00     4510.00     2500.00        2.903       1.660    10.00      0.0         0.0       0.0         0.0
0 5740        372.50     4510.00     2500.00        0.905       0.563    10.00      0.0         0.0       0.0         0.0
0 5740        370.00     4512.50     2500.00        2.642       1.511    10.00      0.0         0.0       0.0         0.0
0 5740        372.50     4512.50     2500.00        1.285       0.759    10.00      0.0         0.0       0.0         0.0
0 5740        375.00     4510.00     5000.00        0.895       0.606    10.00      0.0         0.0       0.0         0.0
0 5740        380.00     4510.00     5000.00        1.348       2.840    10.00      0.0         0.0       0.0         0.0
0 5740        365.00     4515.00     5000.00        0.957       0.649    10.00      0.0         0.0       0.0         0.0
0 5740        370.00     4515.00     5000.00        1.141       1.649    10.00      0.0         0.0       0.0         0.0
0 5740        375.00     4515.00     5000.00        1.193       0.790    10.00      0.0         0.0       0.0         0.0
0 5740        380.00     4515.00     5000.00        0.378       0.458    10.00      0.0         0.0       0.0         0.0
0 5740        355.00     4520.00     5000.00        0.094       0.041    10.00      0.0         0.0       0.0         0.0
0 5740        360.00     4520.00    10000.00        2.019       1.318    10.00      0.0         0.0       0.0         0.0
0 5740        370.00     4520.00    10000.00        0.760       1.236    10.00      0.0         0.0       0.0         0.0
0 5740        355.00     4525.00     5000.00        0.658       0.517    10.00      0.0         0.0       0.0         0.0
0 5740        355.00     4530.00     5000.00        0.415       0.543    10.00      0.0         0.0       0.0         0.0
0 5740        360.00     4530.00    10000.00        0.936       0.985    10.00      0.0         0.0       0.0         0.0
0 5740        370.00     4530.00    10000.00        0.748       0.884    10.00      0.0         0.0       0.0         0.0
1 5740        355.00     4535.00     5000.00        0.078       0.034    10.00      0.0         0.0       0.0         0.0

       28 AREA SOURCE(S).       34 POINT SOURCE(S).
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APPENDIX I

EMISSION SOURCES FOR THE TOLEDO AQMA

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                                             CDMI VERSION 76130,  RUN     1
SOURCE INPUT
   ID          X(KM)        Y(KM)        TX(M)   SO2(G/SEC)  TSP(G/SEC)     HS(M)        D(M)   VS(M/SEC)     TS(DC)    SA(M**2/SEC)
P 5001        273.60      4600.00        0.0        1.756       0.662       27.10        1.00       14.60      880.00        0.0
P 5002        273.50      4600.00        0.0        0.0         4.031        7.00        0.60       23.60       32.20        0.0
P 5063        266.90      4599.70        0.0        1.987       0.288       13.70        0.80        5.30      260.00        0.0
P 5063        266.90      4599.70        0.0        1.987       0.288       13.70        0.80        5.30      260.00        0.0
P 5063        266.90      4599.70        0.0        1.987       0.288       13.70        0.80        5.30      260.00        0.0
P 5003        292.20      4615.60        0.0        0.0         0.346       15.20        0.0         0.0        21.10        0.0
P 5003        292.20      4615.60        0.0        0.0         0.144       15.20        0.0         0.0        21.10        0.0
P 5003        292.20      4615.60        0.0        0.0         0.173       15.20        0.0         0.0        21.10        0.0
P 5003        292.20      4615.60        0.0        0.0         0.115        6.10        0.0         0.0        10.00        0.0
P 5003        292.20      4615.60        0.0        0.0         0.605        9.10        0.0         0.0        10.00        0.0
P 5003        292.20      4615.60        0.0        0.0         0.662       38.00        0.0         0.0        22.20        0.0
P 5003        292.20      4615.60        0.0        0.0         0.662       38.00        0.0         0.0        22.20        0.0
P 5003        292.20      4615.60        0.0        0.0         0.346       38.00        0.0         0.0        22.20        0.0
P 5006        283.90      4616.50        0.0        0.749       0.115       53.30        1.80        0.0       -17.80        0.0
P 5006        283.90      4616.50        0.0        0.749       0.115       53.30        0.0         0.0       -17.80        0.0
P 5008        288.20      4615.20        0.0        0.474       0.115       45.10        1.80        0.0       204.40        0.0
P 5008        288.20      4615.20        0.0        0.979       0.115       45.10        1.80        0.0       204.40        0.0
P 5008        288.20      4615.20        0.0        0.979       0.115       45.10        1.80        0.0       204.40        0.0
P 5009        288.80      4620.80        0.0        1.094       1.641       15.20        0.90        9.70      326.70        0.0
P 5009        288.80      4620.80        0.0        1.238       1.871       15.20        0.80       12.70      292.20        0.0
P 5011        293.10      4616.40        0.0        2.764       0.259       61.00        3.40        2.30      287.80        0.0
P 5011        293.10      4616.40        0.0        2.764       0.259       61.00        3.40        2.30      287.80        0.0
P 5011        293.10      4616.40        0.0        2.764       0.259       61.00        3.40        2.30      287.80        0.0
P 5011        293.10      4616.40        0.0        2.764       0.259       61.00        3.40        2.30      287.80        0.0
P 5011        293.10      4616.40        0.0        9.041       1.008       18.30        1.40        9.10      237.80        0.0
P 5011        293.10      4616.40        0.0        9.041       1.008       18.30        1.40        9.10      237.80        0.0
P 5011        293.10      4616.40        0.0       20.010       2.217       45.70        2.40       14.10      460.00        0.0
P 5011        293.10      4616.40        0.0        2.793       0.259       45.70        2.40       14.10      460.00        0.0
P 5011        293.10      4616.40        0.0        9.962       0.749       43.60        1.90        9.50      548.90        0.0
P 5011        293.10      4616.40        0.0        2.822       0.058       27.10        1.00        6.50      371.10        0.0
P 5011        293.10      4616.40        0.0        7.687       0.518       45.70        2.40        3.30      426.70        0.0
P 5011        293.10      4616.40        0.0       11.373       0.691       31.70        2.40        8.40      565.60        0.0
P 5011        293.10      4616.40        0.0        5.586       0.777       49.40        2.40        3.10      248.90        0.0
P 5011        293.10      4616.40        0.0        3.253       0.202       25.60        1.60        7.20      476.70        0.0
P 5011        293.10      4616.40        0.0        1.958       0.115       25.60        1.60        4.30      476.70        0.0
P 5011        293.10      4616.40        0.0        1.756       0.086       25.30        1.40        4.70      454.40        0.0
P 5011        293.10      4616.40        0.0       10.020       0.029       22.30        1.40        2.50      482.20        0.0
P 5011        293.10      4616.40        0.0       44.081       5.327       49.40        2.40        9.90      248.90        0.0
P 5011        293.10      4616.40        0.0       10.941       0.0         30.50        0.80        2.80      537.80        0.0
P 5063        290.10      4618.50        0.0        0.0         0.230       20.10        1.20       10.80      537.80        0.0
P 5063        290.10      4618.50        0.0        0.0         0.202        8.20        1.20       14.90      442.80        0.0
P 5012        285.80      4620.50        0.0        1.411       0.202       12.20        1.00        3.00      232.20        0.0
P 5012        285.80      4620.50        0.0        1.411       0.202       12.20        1.00        3.00      232.20        0.0
P 5012        285.80      4620.50        0.0        1.411       0.202       12.20        1.00        3.00      232.20        0.0
P 5012        285.80      4620.50        0.0        0.0         0.086       10.40        0.10       21.20      274.00        0.0
P 5012        285.80      4620.50        0.0        0.0         0.432       12.20        5.20        0.10       37.80        0.0
P 5012        285.80      4620.50        0.0        0.0         0.421       12.50        1.10       15.40       57.20        0.0
P 5012        285.80      4620.50        0.0        0.0         0.864       31.40        0.30       18.70       32.20        0.0
P 5012        285.80      4620.50        0.0        0.0         1.246       32.90        0.30       19.40       26.70        0.0
P 5012        285.60      4620.50        0.0        0.0         0.777       32.30        0.80        2.40       37.80        0.0
P 5012        285.80      4620.50        0.0        0.0         1.296       33.50        0.30       11.00       26.70        0.0
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                                                    CDMI VERSION 76130,  RUN     1
SOURCE INPUT
  ID          X(KM)       Y(KM)       IX(M)   SO2(G/SEC)  TSP(G/SEC)    HS(M)       D(M)    VS(M/SEC)    TS(DC)   SA(M**2/SEC)
P 5012       285.80     4620.50        0.0        0.0        0.777       7.30       0.60       16.10       37.80      0.0
P 5012       285.80     4620.50        0.0        0.0        0.518       9.10       0.60        4.40       32.20      0.0
P 5012       285.80     4620.50        0.0        0.0        0.921       9.80       1.20        9.70       65.60      0.0
P 5064       290.50     4616.10        0.0        0.0        0.777      13.10       2.00        0.0        10.00      0.0
P 5064       290.50     4616.10        0.0        0.0        0.950      38.10       1.50        4.80      314.40      0.0
P 5014       282.20     4609.70        0.0        0.749      0.115      45.70       2.10        1.00      287.80      0.0
P 5014       282.20     4609.70        0.0        0.749      0.115      45.70       2.10        1.00      287.80      0.0
P 5014       282.20     4609.70        0.0        3.657      0.576      45.70       2.10        1.00      287.80      0.0
P 5017       290.50     4614.30        0.0        6.507      0.202      83.80       4.90        2.50      304.40      0.0
P 5017       290.50     4614.30        0.0        6.305      0.202      83.80       4.90        2.50      304.40      0.0
P 5017       290.50     4614.30        0.0        4.405      0.173      83.80       4.90        2.50      304.40      0.0
P 5017       290.50     4614.30        0.0        4.204      0.173      83.80       4.90        2.50      304.40      0.0
P 5017       290.50     4614.30        0.0       16.584      0.288      90.80       6.70        5.90      157.20      0.0
P 5017       290.50     4614.30        0.0       62.507      0.259      90.80       6.70        5.90      157.20      0.0
P 5017       290.50     4614.30        0.0       74.514      0.633      90.80       6.70        5.90      157.20      0.0
P 5017       290.50     4614.30        0.0      200.651      5.816      75.00       3.40        8.00      132.20      0.0
P 5017       290.50     4614.30        0.0      131.320      5.960      90.80       6.70        5.90      157.20      0.0
P 5017       290.50     4614.30        0.0      131.320      4.693      90.80       6.70        5.90      157.20      0.0
P 5018       289.10     4613.90        0.0        1.555      0.029      62.20       4.80        0.0       287.80      0.0
P 5018       289.10     4613.90        0.0        0.864      0.029      62.20       4.80        0.0       287.80      0.0
P 5018       289.10     4613.90        0.0        5.557      0.173      65.20       4.10        3.60      201.10      0.0
P 5018       289.10     4613.90        0.0        5.067      0.144      65.20       4.10        3.60      201.10      0.0
P 5018       289.10     4613.90        0.0       10.682      0.346      60.40       4.10        1.70      175.90      0.0
P 5065       291.70     4616.40        0.0        0.0        1.008       3.00       0.0         0.0        10.00      0.0
P 5066       285.70     4611.00        0.0        0.0        1.871      14.30       0.90       16.50       21.10      0.0
P 5067       289.40     4622.30        0.0        0.0        0.202      12.20       2.70        2.70       93.30      0.0
P 5068       292.90     4615.30        0.0        0.317      0.864       7.60       0.70        4.90       65.60      0.0
P 5020       293.90     4616.70        0.0       21.191      0.346      41.10       2.30       19.90      454.40      0.0
P 5020       293.90     4616.70        0.0       21.191      0.346      41.10       2.30       19.90      454.40      0.0
P 5020       293.90     4616.70        0.0        6.536      0.0        41.10       0.90       21.10      426.70      0.0
P 5020       293.90     4616.70        0.0        6.536      0.0        41.10       0.90       21.10      426.70      0.0
P 5020       293.90     4616.70        0.0        1.900      0.605      41.10       2.30       19.90      454.40      0.0
P 5020       293.90     4616.70        0.0        1.411      0.461      41.10       2.30       19.90      454.40      0.0
P 5021       289.40     4611.90        0.0        0.0       16.152       6.10       0.0         0.0        10.00      0.0
P 5021       289.40     4611.90        0.0        0.0        0.633       3.70       0.0         0.0        37.80      0.0
P 5022       293.90     4616.70        0.0        0.0        0.173      44.20       0.90       11.90      204.40      0.0
P 5022       293.90     4616.70        0.0        0.0        0.086      44.20       0.90       11.90       37.80      0.0
P 5062       291.50     4611.80        0.0       19.463      1.267      53.30       2.40        7.40      454.40      0.0
P 5062       291.50     4611.80        0.0       12.525      0.173      30.50       1.80        7.20      365.60      0.0
P 5062       291.50     4611.80        0.0       15.145      0.864      53.30       2.40        5.30      460.00      0.0
P 5062       291.50     4611.80        0.0        7.659      0.374      20.80       1.50        7.80      371.10      0.0
P 5062       291.50     4611.80        0.0        7.659      0.374      20.80       1.50        7.80      371.10      0.0
P 5062       291.50     4611.80        0.0        7.659      0.374      20.80       1.50        8.60      440.60      0.0
P 5062       291.50     4611.80        0.0        7.659      0.374      20.80       1.50        7.40      382.20      0.0
P 5062       291.50     4611.80        0.0        9.098      0.806      38.10       1.90       10.90      510.00      0.0
P 5062       291.50     4611.80        0.0        9.441      0.720      38.10       1.80        9.00      537.80      0.0
P 5062       291.50     4611.80        0.0        3.052      0.029      30.60       1.40        2.30      265.60      0.0
P 5062       291.50     4611.80        0.0       11.315      0.173      15.80       1.40        5.10      529.40      0.0
P 5062       291.50     4611.80        0.0       11.315      0.173      15.80       1.40        5.20      548.90      0.0
P 5062       291.50     4611.80        0.0       13.619      0.202      18.00       1.50        4.50      379.40      0.0
P 5062       291.50     4611.80        0.0        5.096      0.058      19.20       1.20        6.50      393.30      0.0
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                                                CDMI VERSION 76130,  RUN     1
SOURCE INPUT
  ID        X(KM)       Y(KM)     TX(M)  SO2(G/SEC)  TSP(G/SEC)       HS(M)       D(M)   VS(M/SEC)     TS(DC)  SA(M**2/SEC)
P 5062       291.50     4611.80       0.0      14.492       0.202       36.60       1.70        9.20     213.30       0.0
P 5062       291.50     4611.80       0.0       8.521       0.115       27.40       1.20        8.20     393.30       0.0
P 5062       291.50     4611.80       0.0       1.843       0.029       24.10       0.70        3.40     457.20       0.0
P 5062       291.50     4611.80       0.0       3.052       0.029       14.30       0.90        6.00     261.10       0.0
P 5062       291.50     4611.80       0.0      22.774       0.346       27.40       1.70        6.90     398.90       0.0
P 5062       291.50     4611.80       0.0       4.895       0.058       27.40       1.40        7.10     404.40       0.0
P 5062       291.50     4611.80       0.0      67.748       1.065       31.70       2.20       18.70     218.30       0.0
P 5062       291.50     4611.80       0.0       9.904       0.144       42.70       0.60       72.20     365.60       0.0
P 5062       291.50     4611.80       0.0       9.904       0.144       42.70       1.20      162.90    4537.80       0.0
P 5062       291.50     4611.80       0.0       3.369       0.029       42.70       1.70        1.90     293.30       0.0
P 5062       291.50     4611.80       0.0       6.248       0.173       42.70       1.60        7.50     404.40       0.0
P 5062       291.50     4611.80       0.0      10.855       0.518       42.70       1.80        7.80     307.20       0.0
P 5062       291.50     4611.80       0.0      10.855       0.518       42.70       1.80        7.80     290.60       0.0
P 5062       291.50     4611.80       0.0      13.763       0.489       53.30       3.70        6.00     260.00       0.0
P 5062       291.50     4611.80       0.0      21.047       0.777       53.30       3.70        6.00     260.00       0.0
P 5062       291.50     4611.80       0.0       7.831       0.288       42.70       2.00        7.30     285.00       0.0
P 5062       291.50     4611.80       0.0       5.758       0.259       42.70       2.00        7.30     285.00       0.0
P 5062       291.50     4611.80       0.0      25.769       2.505       30.50       2.90        7.20     198.90       0.0
P 5062       291.50     4611.80       0.0       6.305       0.086       10.70       1.50        4.00     260.00       0.0
P 5062       291.50     4611.80       0.0      10.308       0.893       76.20       3.00       28.20     232.20       0.0
P 5062       291.50     4611.80       0.0      10.308       0.893       76.20       3.00       28.20     232.20       0.0
P 5024       283.10     4610.60       0.0       5.240       1.382       27.40       1.10       12.30     260.00       0.0
P 5024       283.10     4610.60       0.0      10.480       2.764       27.40       1.50       10.20     260.00       0.0
P 5024       283.10     4610.60       0.0      10.480       2.764       27.40       1.50       10.20     260.00       0.0
P 5025       289.30     4611.20       0.0       0.0        10.797        9.10       0.0         0.0       10.00       0.0
P 5025       289.30     4611.20       0.0       0.0         0.518        6.10       0.50       69.90      10.00       0.0
P 5025       289.30     4611.20       0.0       0.0         1.065       30.50       1.00       14.20      10.00       0.0
P 5033       283.10     4614.30       0.0       0.0         0.547       19.80       1.50       15.10     118.30       0.0
P 5035       292.80     4616.10       0.0       2.706       0.489       36.60       3.00        3.80     204.40       0.0
P 5035       292.80     4616.10       0.0       2.706       0.489       36.60       3.00        3.80     204.40       0.0
P 5035       292.80     4616.10       0.0       2.706       0.489       36.60       3.00        3.80     204.40       0.0
P 5035       292.80     4616.10       0.0       0.0        10.365       61.00       3.70        4.90     204.40       0.0
P 5035       292.80     4616.10       0.0       0.0        11.862       48.80       1.80        8.10     204.40       0.0
P 5035       292.80     4616.10       0.0      17.131      11.085       61.00       2.50       16.30     287.80       0.0
P 5035       292.80     4616.10       0.0       0.0         3.110       15.20      11.10        0.0      -17.80       0.0
P 5036       286.70     4617.60       0.0       3.513       0.317       68.60       4.30        3.20     204.40       0.0
P 5036       286.70     4617.60       0.0       3.513       0.317       68.60       4.30        3.20     204.40       0.0
P 5036       286.70     4617.60       0.0       1.094       0.086       62.50       3.40        0.50     143.30       0.0
P 5036       286.70     4617.60       0.0       1.094       0.086       62.50       3.40        0.50     143.30       0.0
P 5036       286.70     4617.60       0.0       1.094       0.086       62.50       3.40        0.50     143.30       0.0
P 5036       286.70     4617.60       0.0       1.094       0.086       62.50       3.40        0.50     143.30       0.0
P 5036       286.70     4617.60       0.0       1.094       0.086       62.50       3.40        0.50     143.30       0.0
P 5036       286.70     4617.60       0.0       1.094       0.086       62.50       3.40        0.50     143.30       0.0
P 5037       290.00     4620.50       0.0       0.749       0.058       65.50       2.40        2.70     204.40       0.0
P 5037       290.00     4620.50       0.0       0.749       0.058       65.50       2.40        2.70     204.40       0.0
P 5039       289.10     4617.70       0.0       0.0        20.414        9.10       0.0         0.0       10.00       0.0
P 5040       277.90     4616.60       0.0       0.0         0.086        6.10       0.50        0.0       21.10       0.0
P 5041       278.50     4612.90       0.0       0.0         5.874        9.10       0.0         0.0       10.00       0.0
P 5042       282.10     4615.10       0.0       2.793       0.432       10.10       1.70        5.20     282.20       0.0
P 5069       286.50     4612.90       0.0       0.0         0.374       24.40       0.60        0.0       21.10       0.0
P 5044       293.00     4612.10       0.0       1.468       0.202        9.80       0.80        0.90     260.00       0.0
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                                         CDM1 VERSION 76150,  RUN     1

SOURCE INPUT
   ID        X(KM)      Y(KM)      TX(M)   SO2(G/SEC)  TSP(G/SEC)    HS(M)       D(M)    VS(M/SEC)    TS(DC)    SA(M**2/SEC)
P 5044      293.00     4612.10      0.0        1.468       0.202       9.80       0.80        0.90     260.00        0.0
P 5044      293.00     4612.10      0.0        1.468       0.202       9.80       0.80        0.90     260.00        0.0
P 5045      297.30     4618.10      0.0      374.584      14.972      76.20       3.70       16.20     130.00        0.0
P 5045      297.30     4618.10      0.0      400.459      15.836      76.20       3.70       16.20     130.00        0.0
P 5045      297.30     4618.10      0.0      385.381       5.730      76.20       3.70       15.70     129.40        0.0
P 5045      297.30     4618.10      0.0      651.651       6.737      76.20       4.30       16.90     135.60        0.0
P 5046      295.70     4616.80      0.0        2.554       0.0        30.50       2.00        1.40     737.80        0.0
P 5046      295.70     4616.80      0.0       55.741       0.317      36.60       3.60        2.50     498.90        0.0
P 5046      295.70     4616.80      0.0       97.664       0.576      36.60       5.10        1.20     498.90        0.0
P 5046      295.70     4616.80      0.0       11.065       0.058      41.10       1.20        2.00     746.10        0.0
P 5046      295.70     4616.80      0.0       16.584       0.086      36.60       1.90        1.10     632.20        0.0
P 5046      295.70     4616.80      0.0       19.406       0.115      35.10       1.90        1.10     623.90        0.0
P 5046      295.70     4616.80      0.0       55.137       0.317      13.40       2.60        1.90     562.80        0.0
P 5046      295.70     4616.80      0.0       56.519       0.317      36.90       2.10        1.30     426.70        0.0
P 5046      295.70     4616.80      0.0       18.427       0.086      36.60       1.30        3.00     723.90        0.0
P 5046      295.70     4616.80      0.0      115.348       0.0       104.50       0.20        5.70    1648.90        0.0
P 5046      295.70     4616.80      0.0      129.506       7.687      76.20       3.40        7.00     204.40        0.0
P 5046      295.70     4616.80      0.0        2.361       0.173      45.70       0.90       14.60     704.40        0.0
P 5048      296.00     4617.80      0.0       41.864       2.188      22.90       1.30        7.20      82.20        0.0
P 5048      296.00     4617.80      0.0        6.565       0.489      12.20       0.80       11.50      48.90        0.0
P 5050      278.30     4605.40      0.0        0.0         1.584       9.10       0.0         0.0       10.00        0.0
P 5057      277.50     4605.10      0.0        0.0        37.199       4.60       0.0         0.0       10.00        0.0
P 5071      271.70     4617.60      0.0        0.0         2.044      16.80       3.00        1.70      65.60        0.0
P 5053      271.60     4618.20      0.0        0.0         0.403      18.30       0.80       18.60      93.30        0.0
P 5053      271.60     4618.20      0.0        0.0         1.641      22.90       0.0         0.0      204.40        0.0
P 5053      271.60     4618.20      0.0        0.0         3.599      18.30       1.80        4.30     121.10        0.0
P 5053      271.60     4618.20      0.0        0.0         0.864      15.20       0.70        6.70      93.30        0.0
P 5053      271.60     4618.20      0.0        0.0         1.094      18.30       0.0         0.0       21.10        0.0
P 5053      271.60     4618.20      0.0        0.0         0.029      11.00       0.0         0.0       10.00        0.0
P 5053      271.60     4618.20      0.0        0.0         0.029      11.00       0.0         0.0       10.00        0.0
P 5054      272.20     4618.60      0.0        0.115       0.144      21.90       1.50        3.70      48.90        0.0
P 5001      271.60     4588.10      0.0        0.0         2.275      10.70       1.20        8.10     148.90        0.0
P 5016      266.70     4563.70      0.0        0.0         1.094       9.10       1.50        5.20     110.00        0.0
P 5002      278.40     4569.90      0.0        0.0         1.447      12.20       3.00        1.30     148.90        0.0
P 5003      282.20     4592.80      0.0        0.0         2.275      21.30       3.00        1.30     148.90        0.0
P 5005      278.30     4577.40      0.0        0.0         0.691      13.70       1.20       10.50      54.40        0.0
P 5006      296.80     4606.10      0.0        0.0         1.468       6.70       1.80        3.60      60.00        0.0
P 5007      291.00     4610.20      0.0       15.519       0.744      83.80       2.10        5.30     315.60        0.0
P 5007      291.00     4610.20      0.0        3.685       0.979      83.80       2.10        5.30     315.60        0.0
P 5007      291.00     4610.00      0.0        4.376       1.296      54.90       2.40        5.10     315.60        0.0
P 5007      291.00     4610.00      0.0        0.0         2.879      64.00       3.00        7.20     569.40        0.0
P 5009      291.40     4568.10      0.0        0.0         1.296      13.70       1.70        7.20      82.20        0.0
P 5010      286.90     4609.80      0.0        1.694       0.202      27.10       2.40        5.60     -17.80        0.0
P 5010      286.90     4609.80      0.0        4.576       0.547      27.10       2.60        6.30     273.90        0.0
P 5010      286.90     4609.80      0.0        6.018       0.720      29.90       2.40        7.10     -17.80        0.0
P 5010      286.90     4609.80      0.0        0.0         2.644      64.60       2.00       18.00     648.90        0.0
P 5010      286.90     4609.80      0.0        0.0         2.419      64.60       2.40       13.70     621.10        0.0
P 5010      286.90     4609.80      0.0        0.0         4.204      76.80       2.40       16.30     515.60        0.0
P 5015      278.90     4583.70      0.0       41.633      19.838      76.20       2.90        1.80     287.80        0.0
P 5015      278.90     4583.70      0.0        2.678      18.888      19.50       0.90       17.10     148.90        0.0
P 5011      268.40     4607.70      0.0        0.0         2.275      10.70       1.20        8.10     148.90        0.0
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                                              CDM1 VERSION 76130,  RUN     1
SOURCE INPUT
  ID          X(KM)       Y(KM)        TX(M)    SO2(G/SEC)   TSP(G/SEC)     HS(M)          D(M)    VS(M/SEC)      TS(OC)    SA(M**2/SEC)
P 5012       278.40     4600.40         0.0          0.0        1.497        7.30          1.20         8.10      148.90          0.0
P 5013       279.80     4601.60         0.0          0.0        2.275        6.10          0.90        14.40      148.90          0.0
P 5014       286.30     4600.10         0.0          0.0        0.461       15.50          2.10         9.60       62.20          0.0
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                                              CDMI VERSION 76130,  RUN    1
SOURCE INPUT
   ID        X(KM)       Y(KM)      TX(M)    SO2(G/SEC)  TSP(G/SEC)    HS(M)      D(M)   VS(M/SEC)    TS(DC)   SA(M**2/SEC)
0 3720      260.00     4590.00   10000.00       1.797       3.050      10.00       0.0       0.0         0.0       0.0
0 3720      270.00     4595.00    5000.00       0.756       1.116      10.00       0.0       0.0         0.0       0.0
0 3720      260.00     4600.00   10000.00       2.469       4.528      10.00       0.0       0.0         0.0       0.0
0 3720      270.00     4600.00   10000.00       2.481       2.816      10.00       0.0       0.0         0.0       0.0
0 3720      280.00     4605.00    5000.00       3.181       2.099      10.00       0.0       0.0         0.0       0.0
0 3720      260.00     4610.00   10000.00       1.591       2.566      10.00       0.0       0.0         0.0       0.0
0 3720      270.00     4610.00    5000.00       0.780       1.037      10.00       0.0       0.0         0.0       0.0
0 3720      275.00     4610.00    5000.00       1.814       1.330      10.00       0.0       0.0         0.0       0.0
0 3720      280.00     4610.00    2500.00       0.449       0.461      10.00       0.0       0.0         0.0       0.0
0 3720      282.50     4610.00    2500.00       1.302       0.925      10.00       0.0       0.0         0.0       0.0
0 3720      280.00     4612.50    2500.00       0.780       0.559      10.00       0.0       0.0         0.0       0.0
0 3720      282.50     4612.50    2500.00       1.477       0.912      10.00       0.0       0.0         0.0       0.0
0 3720      285.00     4610.00    2500.00       2.446       1.469      10.00       0.0       0.0         0.0       0.0
0 3720      287.50     4610.00    2500.00       1.470       0.810      10.00       0.0       0.0         0.0       0.0
0 3720      285.00     4612.50    2500.00       3.149       2.100      10.00       0.0       0.0         0.0       0.0
0 3720      287.50     4612.50    2500.00       4.140       1.658      10.00       0.0       0.0         0.0       0.0
0 3720      290.00     4610.00    2500.00       1.636       0.994      10.00       0.0       0.0         0.0       0.0
0 3720      292.50     4610.00    2500.00       0.398       0.435      10.00       0.0       0.0         0.0       0.0
0 3720      290.00     4612.50    2500.00       2.145       1.170      10.00       0.0       0.0         0.0       0.0
0 3720      292.50     4612.50    2500.00       0.536       0.461      10.00       0.0       0.0         0.0       0.0
0 3720      295.00     4610.00    5000.00       0.822       1.026      10.00       0.0       0.0         0.0       0.0
0 3720      300.00     4610.00   10000.00       3.087       3.880      10.00       0.0       0.0         0.0       0.0
0 3720      310.00     4610.00    5000.00       1.787       2.569      10.00       0.0       0.0         0.0       0.0
0 3720      270.00     4615.00    5000.00       0.837       0.963      10.00       0.0       0.0         0.0       0.0
0 3720      275.00     4615.00    5000.00       1.973       1.434      10.00       0.0       0.0         0.0       0.0
0 3720      280.00     4615.00    2500.00       1.258       0.820      10.00       0.0       0.0         0.0       0.0
0 3720      282.50     4615.00    2500.00       1.784       1.037      10.00       0.0       0.0         0.0       0.0
0 3720      280.00     4617.50    2500.00       1.119       0.734      10.00       0.0       0.0         0.0       0.0
0 3720      282.50     4617.50    2500.00       2.524       1.514      10.00       0.0       0.0         0.0       0.0
0 3720      285.00     4615.00    2500.00       2.337       1.392      10.00       0.0       0.0         0.0       0.0
0 3720      287.50     4615.00    2500.00       3.560       2.119      10.00       0.0       0.0         0.0       0.0
0 3720      285.00     4617.50    2500.00       3.213       1.599      10.00       0.0       0.0         0.0       0.0
0 3720      287.50     4617.50    2500.00       1.866       0.859      10.00       0.0       0.0         0.0       0.0
0 3720      290.00     4615.00    2500.00       1.829       3.928      10.00       0.0       0.0         0.0       0.0
0 3720      292.50     4615.00    2500.00       2.156       1.126      10.00       0.0       0.0         0.0       0.0
0 3720      290.00     4617.50    5000.00       2.793       1.615      10.00       0.0       0.0         0.0       0.0
0 3720      295.00     4615.00    5000.00       2.502       3.410      10.00       0.0       0.0         0.0       0.0
0 3720      260.00     4620.00    5000.00       0.085       0.190      10.00       0.0       0.0         0.0       0.0
0 3720      265.00     4620.00    5000.00       0.085       0.190      10.00       0.0       0.0         0.0       0.0
0 3720      270.00     4620.00    5000.00       0.772       0.958      10.00       0.0       0.0         0.0       0.0
0 3720      275.00     4620.00    5000.00       1.176       1.031      10.00       0.0       0.0         0.0       0.0
0 3720      280.00     4620.00    2500.00       1.497       0.989      10.00       0.0       0.0         0.0       0.0
0 3720      282.50     4620.00    2500.00       1.224       0.811      10.00       0.0       0.0         0.0       0.0
0 3720      285.00     4620.00    2500.00       0.876       0.604      10.00       0.0       0.0         0.0       0.0
0 3720      287.50     4620.00    2500.00       0.983       1.263      10.00       0.0       0.0         0.0       0.0
0 3720      295.00     4620.00    5000.00       1.522       1.946      10.00       0.0       0.0         0.0       0.0
0 7580      260.00     4560.00   10000.00       0.654       0.905      10.00       0.0       0.0         0.0       0.0
0 7580      270.00     4560.00   10000.00       1.054       0.833      10.00       0.0       0.0         0.0       0.0
0 7580      280.00     4560.00   10000.00       0.619       0.613      10.00       0.0       0.0         0.0       0.0
0 7580      290.00     4560.00   10000.00       0.649       0.561      10.00       0.0       0.0         0.0       0.0
0 7580      260.00     4570.00   10000.00       0.565       0.705      10.00       0.0       0.0         0.0       0.0
```

```
                                          COM1 VERSION 76130,  RUN     1
SOURCE INPUT
   ID           X(KM)       Y(KM)       IX(M)     SO2(G/SEC)   TSP(G/SEC)     HS(M)        D(M)    VS(M/SEC)      TS(DC)    SA(M**2/SEC)
0 7580         270.00     4570.00    10000.00          0.681        0.557      10.00         0.0          0.0         0.0          0.0
0 7580         280.00     4570.00    10000.00          0.508        0.623      10.00         0.0          0.0         0.0          0.0
0 7580         290.00     4570.00    10000.00          1.077        0.668      10.00         0.0          0.0         0.0          0.0
0 7580         260.00     4580.00    10000.00          0.777        0.561      10.00         0.0          0.0         0.0          0.0
0 7580         270.00     4580.00     5000.00          0.274        0.436      10.00         0.0          0.0         0.0          0.0
0 7580         275.00     4580.00     5000.00          3.007        1.785      10.00         0.0          0.0         0.0          0.0
0 7580         280.00     4580.00    10000.00          0.708        1.184      10.00         0.0          0.0         0.0          0.0
0 7580         290.00     4580.00    10000.00          0.778        0.611      10.00         0.0          0.0         0.0          0.0
0 7580         270.00     4585.00     5000.00          0.361        0.518      10.00         0.0          0.0         0.0          0.0
0 7580         275.00     4585.00     5000.00          0.922        0.591      10.00         0.0          0.0         0.0          0.0
0 7580         270.00     4590.00     5000.00          0.358        0.278      10.00         0.0          0.0         0.0          0.0
0 7580         275.00     4590.00     5000.00          0.263        0.284      10.00         0.0          0.0         0.0          0.0
0 7580         280.00     4590.00    10000.00          0.736        0.557      10.00         0.0          0.0         0.0          0.0
0 7580         290.00     4590.00    10000.00          1.040        0.658      10.00         0.0          0.0         0.0          0.0
0 7580         275.00     4595.00     5000.00          0.262        0.272      10.00         0.0          0.0         0.0          0.0
0 7580         280.00     4600.00     5000.00          1.714        0.898      10.00         0.0          0.0         0.0          0.0
0 7580         285.00     4600.00     5000.00          0.034        0.015      10.00         0.0          0.0         0.0          0.0
0 7580         290.00     4600.00    10000.00          2.744        1.717      10.00         0.0          0.0         0.0          0.0
1 7580         285.00     4605.00     5000.00          1.833        0.939      10.00         0.0          0.0         0.0          0.0

        70 AREA SOURCE(S).       207 POINT SOURCE(S).
```